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ABSTRACT

This pilot project, a subproject of the Multi-State Teacher Education Project (M-STEP), was evaluated to determine the feasibility of applying it as a model for program development. The evaluation was divided into three feasibility components: administrative, educational, and human factors. Data was obtained from observation and testing of the 28 teacher trainees participating in the program and from opinions solicited from all personnel involved. The ten program components examined were: university-school district cooperation; performance-centered objectives; instructional systems; microteaching; sensitivity training; nonclassroom activity; in-district course work; seminars and group meetings; classroom teaching; and supervision and evaluation. The only two components which were deemed unfeasible were nonclassroom activity--administratively and educationally unfeasible--and in-district course work--administratively unfeasible. Availability of materials and personnel was a problem in microteaching, and it was felt to be feasible only for small groups. Therefore, the Career Teacher Project seemed to provide a generalizable model for implementing proposed modifications in the state's teacher education program. (Appendixes contain evaluation instruments used.) (RT)

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A STUDY OF THE FEASIBILITY OF THE WASHINGTON STATE UNIVERSITY-BELLEVUE PUBLIC SCHOOLS CAREER TEACHER PROJECT

By

ROBERT EMORY SALSBURY, JR.

A thesis submitted in partial fulfillment of the
requirements for the degree of

DOCTOR OF EDUCATION

WASHINGTON STATE UNIVERSITY
Department of Education

1969

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The members of the Committee appointed to examine the thesis of ROBERT EMORY SALSBURY, JR. find it satisfactory and recommend that it be accepted.

Herbert Hite
Chairman

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Finally, the writer wishes to express his sincere gratitude and appreciation to his wife, Marilyn, and family for their continuing patience, understanding, and encouragement, factors most instrumental in the completion of this work.

A STUDY OF THE FEASIBILITY OF THE WASHINGTON STATE UNIVERSITY-BELLEVUE PUBLIC SCHOOLS CAREER TEACHER PROJECT

ABSTRACT

by Robert Emory Salsbury, Jr., Ed.D.
Washington State University, 1969

Chairman: Herbert Hite

The Washington State University-Bellevue Public Schools Career Teacher Project was a pilot program designed to test proposed solutions for teacher preparation and certification needs in the state of Washington. These needs called for preparation programs that were (1) career-long, (2) jointly planned, (3) performance-based, and (4) individualized. This program, a subproject of the Multi-State Teacher Education Project (M-STEP), contained ten elements:

1. University-district cooperation
2. Performance-centered objectives
3. Instructional systems
4. Microteaching
5. Sensitivity training
6. Nonclassroom activity
7. In-district course work
8. Seminars and group meetings
9. Classroom teaching
10. Supervision and evaluation

The Project provided an opportunity for 28 seniors to acquire, practice, and demonstrate teaching competencies jointly formulated by university and school district staff. Trainees, learning via the systems approach, demonstrated competencies first in a campus

laboratory setting and then in school district classrooms. Each half of the program took one semester and students were evaluated on the same competencies in both settings in an attempt to provide better articulation and integration of on-campus and in-district preparation.

The purpose of this study was to test the feasibility of elements of the Project. Feasibility was considered in the three categories defined:

1. *Administrative feasibility* refers to the practibility or workability of a program or program element in terms of the manpower, facilities, equipment, and materials required to initiate and support the innovation in an operational application. Also, an administrative consideration is the ease of fit of the innovation into the institutional structure in terms of existing rules, procedures, or policies governing similar programs.
2. *Educational feasibility* refers to the demonstrated or prospective capacity of the innovation effectively to assist the learner to acquire the desired skills or competencies described in the program objectives.
3. *Human factors feasibility* refers to the compatibility of innovation and immediate user, whether teacher or learner. This dimension is based on perceptions of and reactions to the program by personnel directly involved.

Feasibility was assessed by (1) collecting data and answering questions raised about each element according to the three feasibility categories, (2) extrapolating this data, and (3) making judgments about the generalizability of program elements in an operational application.

Most elements proved feasible in pilot form. Exceptions were: nonclassroom activity and in-district course work (administratively unfeasible), and nonclassroom activity (educationally unfeasible). The nonclassroom activity element, designed to

provide students proportionate time for study and observation was unsatisfactory due to lack of understanding and acceptance by supervising teachers. Funding and scheduling limitations degraded the feasibility of the in-district course work component.

Examination of the pilot study data provided clues for improving program element use in an operational application. For example, a need was identified for early and intensive in-service training of supervising teachers, including work in identifying and demonstrating teacher performance competencies and methods of evaluating teaching behavior according to performance criteria. Modified where necessary, all program elements except one, sensitivity training, could be considered as potentially feasible in a regular program. More research would be required to assess the effects of sensitivity training before a decision could be made.

From a feasibility standpoint, the Career Teacher Project seemed to provide a generalizable model for implementing proposed modifications in the state's teacher education and certification program.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS iii

ABSTRACT iv

LIST OF TABLES x

LIST OF ILLUSTRATIONS xii

Chapter

I. BACKGROUND AND STATEMENT OF THE PROBLEM 1

  Background of the Study 1

    Multi-State Teacher Education Project (M-STEP) 5
    The New Certification Guidelines 6
    Description of the Career Teacher Project . 7

  Statement of the Problem 9

  Significance of the Study 11

II. BASES FOR THE STUDY 14

  Behavioral Objectives 15

  The Systems Approach 19

  The In-district Experience 23

  The Feasibility Study 25

Chapter Page

III. RESEARCH DESIGN AND PROCEDURES 34

Design of the Feasibility Study 35

Population Sample 35

General Description of the Program 37

Program Elements and Feasibility Considerations 39

University-District Cooperation 39
Performance-Centered Objectives 41
Instructional Systems 43
Microteaching 47
Sensitivity Training 49
Study-Observation Time 51
Classroom Teaching 54
Supervision and Evaluation 56
Seminars and Group Meetings 62
University Course Work 64

Procedures 66

Data Collection Instruments 66
Costing Data 70

IV. PRESENTATION OF FINDINGS 71

Program Elements--General 71

University-District Cooperation 71
Performance-Centered Objectives 75

Program Elements--On-Campus 82

Instructional Systems 82
Microteaching 101
Sensitivity Training 111

Program Elements--In-district 115

Study-Observation Time 120
University Course Work 129
Seminars and Group Meetings 136
Classroom Teaching 138
Supervision and Evaluation 142

Summary 149

Chapter Page

V. PROJECTED APPLICATIONS 151

Introduction 151

Extrapolation Model 152

Program Elements 153

University-District Cooperation 153
Performance-Centered Objectives 159
Instructional Systems 162
Microteaching 168
Sensitivity Training 169
Nonclassroom Activity 171
In-district Course Work 172
Seminars and Group Meetings 174
Classroom Teaching 174
Supervision and Evaluation 177

Summary 181

Conclusions 182

BIBLIOGRAPHY 185

APPENDIX
A. BEHAVIORAL OBJECTIVES AND SELECTED TASKS 189

B. DATA-GATHERING INSTRUMENTS 204

C. SUPPLEMENTARY TABLE 231

LIST OF TABLES

Table Page

1. Proposed Schedule for Study and Teaching 52
2. Travel Costs of Meetings Related to University-District Cooperation 72
3. Travel Costs for In-service Meetings 77
4. Faculty Reaction to Performance Objectives Concept . 81
5. Staff Needed to Support Fall Semester Systems Development Operations 83
6. Staff Needed to Support Fall Semester Systems, Less Microteaching 85
7. Comparison of Facilities Needed for Conventional and Experimental Sections of Education 403-404 86
8. Frequency of Instructional Media Laboratory Use from September 28, 1967, to February 1, 1968 87
9. Intern Rating of Task 4, Writing Cognitive Objectives 95
10. Student Rating of Task 10, Designing Instructional System 96
11. Student Response to Selected Instructional Variables, Individualization of Learning 97
12. Student Response to Selected Instructional Variables, Pacing 97
13. Student Response to Selected Instructional Variables, Learner Response 98
14. Student Response to Selected Instructional Variables, Interaction with Others 98
15. Student Response to Selected Instructional Variables, Knowledge of Results, Feedback, Reinforcement, and Evaluation 99
16. Student Response to Selected Instructional Variables, Closure 99

Table Page

17. Student Response to Selected Instructional Variables, Function of Staff 100

18. Staff Needed to Support Fall Semester Microteaching Operations 102

19. Student Rating of Task 20, Teaching for Application Level 109

20. A Comparison of Conventional and M-STEP In-district Preservice Programs Based on Program Elements . . . 116

21. Comparison of Percentage of Time Spent in Study and Practice of Teaching, Spring 1968 121

22. Intern Rating of Study Time Program Element 122

23. Intern Rating of University Courses Program Element . 132

24. Intern Rating of Group Meetings Program Element . . . 138

25. Intern Rating of Classroom Teaching Program Element . 140

26. Intern Rating of Evaluation: Supervising Teacher Program Element 147

27. Summary of Feasibility Considerations Career Teacher Project, Pilot 150

28. Instructional Staff Needed to Support Maximum Operational Application 163

29. Summary of Projected Applications 181

30. Intern Interview Questions 232

LIST OF ILLUSTRATIONS

Figure Page

1. Comparison of Conventional and Pilot Project Student Teaching Programs 117

2. Extrapolation Procedure 153

CHAPTER I

BACKGROUND AND STATEMENT OF THE PROBLEM

Background of the Study

The Washington State University-Bellevue Public Schools Career Teacher Project was developed and tested as a means of providing a solution to three needs in teacher preparation and certification in the state of Washington. These needs called for:

1. A systematic analysis and description of the performance competencies that make up effective teaching.
2. A teacher preparation program which would enable as many candidates as possible to demonstrate effective teaching performances.
3. A cooperative university or college-district program to better articulate and integrate preservice and in-service learning experiences and provide for the continuous evaluation of progress from college through the first years of teaching.[1]

These needs were identified and articulated and the Career Teacher Project encouraged by the Office of the Superintendent of Public Instruction or State Department of Education. Acting as agents of the State Board of Education, the State Department and the Standards Revisions Committee have, since the early 1960's, been studying the state's preparation and certification practices and have had the responsibility for recommending modifications.

The first indications of a need for change came from two sources, the current teacher certification standards themselves and the literature in the field. One section of the standards stated that the first year of teaching was to be considered as part of the total preparation program of the new teacher. The first year of teaching, furthermore, was to be a type of internship in which the student of education practiced his skills under the watchful supervision of one or more competent professionals. During this first year, suggestions would be offered and plans made for the fifth year of education required for full certification.[2]

In practice, however, the idea of the first-year teacher as a neophyte still in need of directed training and supervision was not recognized, save in a few districts. The beginning teacher in the state of Washington was regarded not as a student of education, but rather as a full-fledged practitioner with the same responsibilities as a veteran teacher and, it might be added, the same predisposition toward mediocrity.[3]

As this same time, several studies also seemed to support the state level findings regarding the gap between the ideals and the realities of the first years of teaching. One of the most significant was James B. Conant's survey of teacher preparation practices and programs in the United States. One of Conant's suggestions was that the beginning teacher be given released time as well as substantial on-the-job assistance and supervision, the latter to be provided by a new sort of professional known as a "clinical professor."[4]

The National Commission on Teacher Education and Professional Standards in two documents, *New Horizons for the Teaching Profession*[5] and *A Position Paper on Teacher Education and*

Professional Standards,[6] likewise stated assumptions supporting a need for consideration of the first years of teaching as a learning experience and for a gradual introduction to teaching guided by highly competent teachers and supervisors. The Commission also called for more innovative practices in teacher preparation as a means of self-renewal of those agencies responsible for the training and induction of new teachers. The rationale for this need was stated as follows:

> The application of new technology to educational problems, current research into the behaviors of teachers in the classroom, the accelerating trend toward school reorganization, and new insights into the nature and structure of knowledge--all contribute to the changing function of the teacher.[7]

In taking action on these findings, the Washington State Superintendent of Public Instruction recommended two proposed studies. The first, the *Washington State Project for the Orientation and Induction of New Teachers (POINT)*, had as its main purpose:

> . . . to demonstrate, through a series of pioneering approaches, systematic and effective ways to aid new teachers in making the transition from pre-service preparation to in-service practice, from minor to major professional responsibility; indeed, from beginning teacher to career status.[8]

This proposal was an antecedent of the internship concepts and joint university-school district efforts to be included in the WSU-Bellevue Career Teacher Project.

A significant study, in terms of providing a link between the expressed needs of the State Department of Education and the consideration of a proposed solution,was titled, "Effects of Reduced Loads and Intensive In-service Treatment upon the

Classroom Behavior of Beginning Elementary Teachers." This study, directed by Herbert Hite, was based on a need for a more effective and planned first-year induction program.[9] In sponsoring this study, the State Department of Education recommended that:

> . . . the state should undertake an experimental study to determine whether or not a substantial reduction in the load of the beginning teacher, together with intensive in-service training, might affect the classroom behavior of these teachers and also affect their attitudes toward the profession.[10]

In the Hite study, various treatments of reduced loads and intensive in-service help were administered to 120 beginning elementary teachers. Trained observers then attempted to measure changes in teacher competency behavior and attitudes that might have been brought about as a result of the treatments. A second objective of the study was to test the feasibility of evaluating teaching effectiveness through observations made by teachers trained for the purpose and using appropriate behaviorally oriented checklists.

Conclusions of the study were: (1) that reduced loads and intensive in-service instruction contribute to a higher level of teacher competence than that demonstrated by teachers not receiving any treatment; (2) that very little relation exists between practices of the beginning teacher in the classroom and existing programs of preservice teacher preparation; and (3) that it is feasible to train teachers to observe and evaluate teacher performance using an appropriate behaviorally centered instrument.[11]

As a means of translating the results of study into action, the State Department of Education took two significant steps to bring teacher preparation and certification practices and standards up to date: the joining of the seven-state compact, the Multi-State Teacher Education Project (M-STEP), and the drafting of the *Guidelines and Standards for Programs of Preparation Leading to Teacher Certification.*[12]

Multi-State Teacher Education Project (M-STEP)

The M-STEP organization was funded under Title V of the Elementary and Secondary Education Act of 1965 for the purpose of strengthening state departments of education and teacher education programs in the member states. M-STEP activities were to be based on the following rationale:

1. The concept of teacher education needs to be extended. The preparation of the teacher begins early in his collegiate career and extends into the first several years of teaching. The education of the teacher really never ends.
2. The responsibility for teacher education is shared. Primary responsibility for preparation gradually shifts from the teacher preparing college, to the public school system, to the professional association, to the individual himself.
3. The concept of what teaching is about is changing. The difference between public speaking and teaching are becoming clearer. New media provide the possibility for individualization of instruction. Methods emphasizing pupil initiative and pupil responsibility for learning seem to be most promising.
4. More of the practical phases of teacher preparation will be done in the public schools involving district personnel and college people.
5. Teacher preparation would be greatly improved if preservice and in-service programs were articulated, and if the resources of both the college and the district were used.

6. Teacher preparation should be designed for excellence.[13] The Washington M-STEP program involved the pairing of teacher preparation institutions and school districts which would work together in teams to develop and test programs to accomplish the goals implied in the rationale. These pairings were:

1. University of Washington-Seattle Public Schools
2. Western Washington State College-Edmonds Public Schools
3. Washington State University-Bellevue Public Schools

Although the three groups operated under the aegis of the State Department of Education and the state rationale, the specific approaches were developed separately by the college-school district teams.

The New Certification Guidelines

The second action taken to improve teacher preparation in the state of Washington was the drafting of new certification guidelines. This work was parallel in time to the M-STEP activity of 1966-1967. The guidelines were an attempt to provide a framework through which present and future needs might be met in the training and certifying of Washington teachers and other educational professionals. Further, the guidelines, in preparing for the future, were to be more than just a better way of doing the same things that had been done in the past in the area of teacher preparation and certification. As the first draft of the guidelines stated:

> The way we think about teaching is changing--the organization and assignment of teaching responsibilities is changing. Even the way we think about reality and the nature of the world has become less certain and more contextual. As a consequence we expect tomorrow to be different from today and we look forward with anticipation to a new set of circumstances, and a new order of

> opportunities and responsibilities for teachers. It is in this framework, one of expected change, that we describe the revised guidelines for the preparation of school personnel.[14]

In this respect, the guidelines represented a way of meeting the challenge issued by T. M. Stinnett at the Northwestern Conference on Teacher Education when he urged teacher preparation organizations "to act, not just to react, in the face of change."[15]

The main emphases of the new guidelines were to be on performance-centered teaching standards; preparation programs which were based on new developments in the psychology of learning and the application of the new theories to education through the medium of educational technology; and new and creative cooperative approaches to the planning, implementation, and evaluation of continuous learning programs for students of education with the first years of teaching to be considered as part of the total program.[16]

Description of the Career Teacher Project

One of the projects carried out as part of the Washington M-STEP project was the Washington State University-Bellevue Public Schools Career Teacher Project. This program, with roots in the POINT proposal and the Hite beginning teachers study, represented a continuation and refinement of concepts and approaches previously suggested and partially tested. In addition, the WSU-Bellevue project, unlike the other M-STEP operations, was directly concerned with the systematic analysis of the teaching act in terms of specific and observable teaching and learning behaviors. This emphasis brought the Career Teacher Project into close relationship with the goals of the new guidelines and the emphasis on performance-centered standards of teaching competence.

As a result, the WSU-Bellevue Career Teacher Project was, from the very outset, under consideration as a prototype for teacher education programs which might implement the new guidelines.

As stated in Appendix A to the third draft of the guidelines, the Career Teacher Project was an attempt to demonstrate that:

1. Standards for teacher education should be descriptions of performances by the effective teacher.
2. The university's program of teacher education should consist of ways and means for helping as many candidates as possible demonstrate the effective teaching performance.
3. The cooperating school district should provide opportunities for the beginning teacher to continue the practice and study of these specific teaching behaviors.[17]

Stated in terms of program goals, the WSU-Bellevue M-STEP program, field-tested during 1967-68, was an attempt to accomplish the following:

1. To provide a teacher education program that seeks to help the prospective teacher to develop and practice observable teaching behaviors.
2. To enable the students involved in the program to work as individuals and small groups to accomplish the tasks that make up the program. This involves individual use of instructional media with provision for self-checking built into the instructional system.
3. To help the student of education to get a good start in teaching through a modified load first-year program with provision made for additional help and conference time as needed.
4. To promote university-school district cooperation in the development and testing of a teacher education program jointly designed to provide maximum articulation between preservice and in-service learning experiences.

5. To provide a working model for the state's new certification standards program which seeks to accredit and upgrade teachers on the basis of performance-centered criteria.

Program objectives were developed jointly by a coordinating committee representing both institutions and stated in the form of behavioral task descriptions of the specific competencies which make up effective teaching (see Appendix A). Program activities and evaluation of learner growth took place in the campus laboratory setting and in the Bellevue classrooms. Personnel from both the university and school district took part in the instruction and evaluation.

Statement of the Problem

The Career Teacher Project was designed to provide a workable and generalizable program model for teacher education. The rationale for the program was based on needs identified at local, state, and national levels, namely to provide cooperatively planned teacher preparation programs which would (1) take into account the need for systematic analysis and description of specific teaching behaviors, and (2) assist students of education to acquire and demonstrate these competencies, both on campus and in the classroom.

The purpose of this study was to help determine the feasibility of expanding and extending major elements of this program with the parent university and to other teacher education institutions in the state. This study was based on the idea that if the Career Teacher Project were to be considered as a teacher education program generalizable in various types of operational applications, then questions needed to be raised and answered regarding the feasibility of this program in view of its potential use.

The identification of feasibility considerations were generated both from the literature on educational innovations and change processes, and from the program itself as it was observed in operation in the field study application. Those factors which seemed to be appropriate in considering the overall feasibility of the Career Teacher Project were administrative feasibility, educational feasibility, and human factors feasibility. These are defined as follows:

1. *Administrative feasibility* refers to the practicability or workability of a program or program element in terms of the manpower, facilities, equipment, and materials required to initiate and support the innovation in an operational application. Also, an administrative consideration is the ease of fit of the innovation into the institutional structure in terms of existing rules, procedures, or policies governing similar programs.
2. *Educational feasibility* refers to the demonstrated or prospective capacity of the innovation to effectively assist the learner to acquire the desired skills or competencies described in the program objectives.
3. *Human factors feasibility* refers to the compatibility of innovation and immediate user, whether teacher or learner. This dimension is based on perceptions of and reactions to the program by personnel directly involved.

It should be recognized that the final decision as to whether all, part, or none of this project is feasible in terms of the objectives and resources of a particular institution would be the decision of an administrator representing that institution. This study was designed to assist in the decision-making process by providing conclusions and generalizable indicators of the feasibility of the Career Teacher Project, both in terms of possible minimum and maximum applications of program elements, through the collection, analysis, and extrapolation of relevant data.

Significance of the Study

Current literature in the field of innovation and change processes in education conclude unanimously that in considering the diffusion and adoption of an innovation, it is necessary to establish more than the intrinsic merit of the innovation.[18] Often, in fact, the "nuts-and-bolts" factors of cost, ease of integration into the receiving system, user attitudes, need for new training, etc., make the crucial difference between early and late adoption, or between acceptance and rejection.

The Washington State University-Bellevue Career Teacher Project is an innovation with a potential for improving teacher preparation programs and certification procedures throughout the state of Washington and elsewhere. However, the strengths of the program are based on the critical factors about which questions must be asked and answered and for which measures of feasibility determined.

Footnote References--Chapter I

[1] "Developing a Systematic Approach to the Training of the Career Teacher" (Pullman, Washington: Washington State University, n.d.), p. I. (Mimeographed.)

[2] Herbert Hite, "Effects of Reduced Loads and Intensive In-service Treatment upon the Classroom Behavior of Beginning Elementary Teachers" (final report, Cooperative Research Project No. 2973, Pullman, Washington: Washington State University, 1966), p. 2. (Mimeographed.)

[3] Dan Lortie, "Teacher Socialization--The Robinson Crusoe Model," *The Real World of the Beginning Teacher* (Washington, D.C.: National Commission on Teacher Education and Professional Standards, National Education Association, 1965), p. 59.

[4] James B. Conant, *The Education of the American Teacher* (New York: McGraw-Hill Book Company, 1963), p. 142.

[5] Margaret Lindsey, ed., *New Horizons for the Teaching Profession* (Washington, D.C.: National Commission on Teacher Education and Professional Standards, National Education Association, 1961).

[6] National Commission on Teacher Education and Professional Standards, National Education Association, *A Position Paper on Teacher Education and Professional Standards* (Washington, D.C.: The Commission, 1963).

[7] *Ibid.*, p. 4.

[8] *Washington State Project for the Orientation and Induction of New Teachers (POINT)* (Olympia, Washington: Superintendent of Public Instruction, 1965), p. 2.

[9] Hite, p. I. [10] *Ibid.*, p. 3. [11] *Ibid.*, p. 76.

[12] *Guidelines and Standards for Programs of Preparation Leading to Teacher Certification* (Olympia, Washington: Superintendent of Public Instruction, March, 1967).

[13] William H. Drummond, "Washington Pioneers College-School Partnership," *Washington Education*, LXXVIII (March, 1967), 10.

[14] *Guidelines and Standards*, p. 2.

[15] T. M. Stinnett, "Teacher Education in Perspective," in *Innovations in Teacher Education*, ed. by Eliezer Krumbein (Evanston, Illinois: Northwestern University Press, 1965), p. 9.

[16] *Guidelines and Standards*.

[17] *Guidelines for Preparation of School Professional Personnel Leading to Certification* (Olympia, Washington: Superintendent of Public Instruction, September, 1967).

[18] Matthew Miles, ed., "Innovation in Education: Some Generalizations," *Innovation in Education* (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 635.

CHAPTER II

BASES FOR THE STUDY

The Washington State University-Bellevue Career Teacher Project was based on a need for more systematically designed and better articulated preservice and in-service learning experiences for the new teacher. This goal, it was hoped, might be attained in part through closer working relationships between the teacher preparation institutions and the public school districts in which the new teachers are inducted into professional practice.

In addition, a continuous and integrated type of training would be needed with provision made for the measurement of the results of that training from the preservice through beginning teaching years. Before initiating such training, it would first be necessary to define the various components that make up teacher competency and translate these descriptions into behavioral tasks to be accomplished by the students of education.

The Career Teacher Project was designed to accomplish these aims. Stating this rationale in the form of goals, the objectives of the program then became:

1. Define behavioral objectives characterizing the competent classroom teaching act.
2. Develop teaching strategies and materials enabling future teachers to demonstrate these specific behaviors.
3. Develop and test procedures for integrating preservice training with induction into professional service.

4. Develop techniques for helping the beginning career teacher demonstrate highly competent teaching behaviors.[1]

The program, as field-tested in 1967-68, represented the attainment of the first three objectives. The fourth, that of working with the beginning career teacher, will be completed during the 1968-69 school year.

The remainder of this chapter deals with the bases in related literature for the development of the Career Teacher Project and with the rationale and bases for the study conducted to investigate the feasibility of the program.

Behavioral Objectives

The idea of characterizing the teaching act in terms of observable teaching behaviors is not a new one. As one teacher stated at a meeting discussing the new certification guidelines, "We've been trying for 2,000 years to define and evaluate teaching and we haven't succeeded yet."

However, the problem facing the teams responsible for designing the Career Teacher Project was not to be brushed aside this simply since any attempt at an articulated program needed to be based on a description of what the end product of the program, the competent career teacher, does when demonstrating effective teaching.[2]

The process of developing descriptions of teaching is often one of combining existent descriptions of teaching, frequently in the form of observation and evaluation instruments, with further live or recorded observations. Added to this combination are new theories of teaching and learning. The result is a new listing or description of qualities. A further consideration is the research hypothesis which stimulates the need for the description in the first place. This question will often dictate the type and range of characteristics and behaviors to be observed and described.[3]

The Career Teacher Project had as its focus the analysis and description of the behavioral competencies that result in and typify effective teaching. Therefore, the study of potential instruments was limited to those which describe observable actions of the teacher rather than instruments or studies concerned with teacher characteristics.

The second instrument used in the pilot form of the study of beginning teachers was the Stanford Teaching Competence Appraisal Guides, developed for use in the Stanford Secondary Education Project by Harry Garrison.[4] A revised version of the Stanford instrument was devised, also by Garrison, for use in the main part of the Hite study. The new instrument, called the Seattle Teaching Performance Appraisal Guide,[5] listed the following categories of teacher behavior:

1. Suitability of goals
2. Student acceptance of goals
3. Exploration of human and material resources
4. Selecting the plan for this class
5. Organizing the class to achieve the plan
6. Classroom control effective action
7. Classroom climate efficient action
8. Active student participation
9. Measuring goal achievement and costs
10. Using measurements to improve teaching and learning
11. Professional participation
12. Community participation

The first ten behaviors were subsumed under a four-step model of the teaching act consisting of (1) developing lesson goals (1, 2); (2) planning goal action (3, 4, 5); (3) fulfilling the plan (6, 7, 8); and (4) evaluating results (9, 10). In addition, each of the behaviors listed included a narrative description of the effective performance of the particular behavior. Thus, for the first behavior the companion description read:

> 1. The lesson aims are clear--reachable by the student--measurable--show modern knowledge of the subject--relate to what precedes and what follows in the subject--include what and how to learn--serve authorized district educational goals.

Another behavioral description of teaching provided the basis for the Stanford University Microteaching Program, developed by Dwight Allen.[6] Allen lists nine components of the teaching act as follows:

1. Establishing set
2. Establishing appropriate frames of reference
3. Achieving closure
4. Using questions effectively
5. Recognizing and obtaining attending behavior
6. Control of participation
7. Providing feedback
8. Employing rewards and punishments (reinforcement)
9. Setting a model[7]

Allen's microteaching criteria shows promise as a way of breaking the teaching act down into behavioral components. Gage in referring to "microcriteria" of effectiveness supports this approach and recommends that "rather than seek criteria for the overall effectiveness of teachers in the many, varied facets of their roles, we may have better success with criteria of effectiveness in small specifically defined aspects of the role."[8]

Another approach to definition of teacher behavior is that of student-teacher interaction. One system, based on the work of Edmund Amidon and Ned Flanders, divides all classroom verbal interaction into ten categories, seven relating to teacher talk, two to student talk, with one division reserved for silence or confusion. Teacher talk is further divided into direct and indirect influence according to whether the teacher increases or restricts the student's freedom to respond. During the class session, an observer tallies interactions by type and frequency and later scores and evaluates the class episode.[9]

A modification of this approach was developed by Gallagher and Aschner[10] using Flanders-like categories and behavioral classifications based on Guilford's concept of intellectual operations.[11]

Other schemes for classifying teacher behavior have considered the teacher as tactician and strategist. According to B. Othanel Smith, the teacher does the following:

1. Visualizes an overall strategy pertinent to the student, subject matter, and class environment.
2. Organizes manipulative bits and move (tactics) in order to attain the larger goals.[12]

Hilda Taba, working with the strategies approach, viewed teacher behavior largely a process of using strategies to teach for development of the following cognitive skills:

1. The processing of information.
2. Inductive development of generalizations (the discovery method).
3. The facility to apply generalizations learned to new materials and problems.[13]

Teachers working with these goals would also be expected to work with students to develop these competencies within the types of hierarchical structures suggested by Bloom[14] and Krathwohl.[15]

Although not listing specific aspects of the teaching act or attempting to develop a precise model of teaching method, Wallen and Travers presented a list and description of six basic principles of learning, derived from and supported by research. The principles are:

1. Behavior which represents the achievement or partial achievement of an educational objective should be reinforced.

2. The introduction of cues which arouse motivation toward the achievement of an educational objective will increase the effectiveness with which that objective is achieved.

3. Practice in applying a principle to the solution of problems will increase the probability of transfer of training to new problems which require the use of the same principle for their solution.

4. Since learners differ in their capacity to make the responses to be acquired, learning will be most efficient if it is planned so that each learner embarks on a program commensurate with his capacity to acquire new responses.

5. If a pupil has had training in imitation, then he is capable of learning by observing demonstration of the skills to be acquired.

6. The learner will learn more efficiently if he makes the response to be learned than if he learns by observing another make the response or makes some related response.[16]

The final list of behavioral objectives developed for the Career Teacher Project was written in the form of specific tasks which teachers perform in the planning, executing, and evaluation of learning and teaching efforts (see Appendix A).

The Systems Approach

As described, the first phase of the development of the Career Teacher Project consisted of developing a list of behaviorally stated performance objectives which would serve as the competencies to be acquired and demonstrated by the students. These were based on a combination of previously identified behaviors derived from observational studies and from attempts to translate principles of learning theory into teaching practice.

The next step was to develop the means to facilitate student acquisition and practice of the desired competencies. At this point the State Department of Education provided guidance through the need expressed in the new certification guidelines for incorporating principles and practices of the new educational technology into the training process. This need was based on the demonstrated feasibility of the new technology as a means of making individualization of instruction possible.[17]

Loughery, in referring to teachers and technology as "man-machine systems," states a need for emphasis on the new technology in teacher education as follows:

> If man-machine systems are to be implemented in education, changes will have to be made in programs for professional preparation in education and in policies and attitudes of employing institutions.[18]

Trow, likewise, sees a need for educational technology, both old (films, slides, audio tapes, radio, etc.) as well as new (television, programmed instruction, language laboratories, computer-assisted instruction, and multimedia systems) in teacher preparation programs. He states:

> Teacher-training institutions will for some time have a dual responsibility. They must prepare their graduates to operate both with the old and the new technology, and they must incorporate the new media into their instructional program wherever they would presumably effect an improvement.[19]

Trow's suggestion implies a two-level approach in which the teacher education program would use the same approaches that students would eventually use in their teaching. Schueler and Lesser expand upon this concept and state:

> But most crucially, a program for the preparation of teachers should itself be a model for teaching, embodying the most effective and most current procedures and concepts of curriculum. Because it is inherently an example of what it purports to teach, it can embody, with its own curriculum and procedures, the very qualities of teaching sought in its students as well as the cutting edge of new developments in the art and science of teaching. . . .[20]

Acceptance of this approach would mean that the students would learn in the same way as their students would learn or, looking at it in another way, university and college staff would have to teach as they would have their own students teach. If there is any truth in the oft-stated, "we teach as we are taught," it might be concluded that an approach in which college students of education learn in the same way as they would teach should facilitate the reinforcement and transfer of the desired methods.

It was decided to use this two-level approach to implement the activities of the Career Teacher Project and to make optimum use of the new media both in teaching and learning contexts.

In view of the learning theory base of the behavioral competencies and the newer media, it was decided to utilize the systems approach as the basic structure of the on-campus learning activities of the program. The systems approach to instruction is essentially a means of facilitating the acquisition of specific learning objectives through the integration and implementation of selected strategies and components. Continuous evaluation is an inherent part of the system and provides criterion measures of student progress as well as feedback information to use in revision of the system.

The systems approach, a means of organizing and integrating the new media in specific educational applications, shares with the 25 behavioral objectives of the Career Teacher Program the same psychological antecedents, including behaviorally specified goals, preassessment of entering behavior, student perception of tasks, equivalent and appropriate practice of tasks to insure transfer, reinforcement of appropriate responses, and knowledge of correct responses and feedback through a process of continuous evaluation. An illustration of the close correspondence between the systems approach and the task descriptions of teaching competencies is illustrated by comparing Glaser's systems model with the behavioral categories of the Career Teacher Project:

Glaser's Model

1. Instructional goals--the system objectives
2. Entering behavior--the system input
3. Instructional procedures--the system operator
4. Performance assessment--the output monitor
5. Research and development logistics[21]

Career Teacher Project

1. Determine objectives
2. Modify objectives to meet individual differences
3. Select media
4. Organize the learning environment
5. Interact with students
6. Evaluate student progress

The In-district Experience

One of the realities facing the Career Teacher Project staff was the fact that even assuming that the behavioral objectives could be satisfactorily defined and on-campus, preservice systems designed to facilitate the acquisition of these behaviors, there still remained the task of articulating and integrating the on-campus and in-district experience during the senior year and into the first years of teaching.

Traditionally, student teaching has been the medium through which an attempt has been made to provide a linkage between campus and school district, between theory and practice. However, there are indications that student teaching is not fulfilling this important function effectively. Ward criticizes student teaching for a lack of real individualization of learning experiences and cites the generally haphazard manner in which student teachers and supervising teachers are "matched."[22] Boyan outspokenly states:

> It is indeed one of the strange anomalies of teacher preparation that conditions for optimum initial practice rarely match the value placed on the importance of practice by all parties to the enterprise. The conditions range from exciting new developments . . . to near fraudulent exploitation of student teachers as carriers of educational bedpans in substandard schools.[23]

Barnes is more optimistic. In pointing out such problems as lack of college-district cooperation in planning and supervision, he notes also that new teachers generally are more impressed with the student teaching experience than with other parts of their training program. However, Barnes looks forward to the time when student teaching might produce a real impact through the "genuinely thoughtful and creative use of supervisory strategies and techniques."[24]

Another problem which may be a cause for the gap between preservice and in-service teacher education is that articulated by Boyan. He cites evidence that school districts regard newly graduated teachers as a finished product.[25] Lortie holds a similar view in discussing the beginning patterns of practice for new teachers.[26]

Several solutions have been proposed as efforts to better integrate college education work with classroom teaching responsibility. An approach which has received publicity, at least partially because of the prestigious foundation and universities committed to it, has been the internship program. Sponsored by the Ford Foundation, the internship has been heralded as a "breakthrough" in the improvement of teacher preparation.[27] The internship is essentially a post-baccalaureate program in which all professional education course work and teaching practice are telescoped into approximately a year's work. Stanford University, in patterning its teacher preparation program after the internship model, has found this a suitable vehicle in which to try out various innovative preparation, supervision, and evaluation approaches such as microteaching and the use of 35 mm time-lapse photography.[28]

Hite's study of beginning teachers in Washington demonstrated the value of in-service treatments and released time as factors in the improvement of teaching competency during the first year of teaching.[29] This study also demonstrated the feasibility of training experienced teachers to observe and evaluate the work of the new teacher. This research lends credence to the desirability of training district personnel as trainers of teachers.

The in-district training model used in the pilot study of the Career Teacher Project was an attempt to blend the functions and advantages of an improved, systematic student teaching program with those of the internship concept. Through this vehicle the students would be able to practice and further demonstrate the behavioral competencies acquired through the on-campus systems activities. These behaviors would be further refined and evaluated through a continuation of the internship during the first years of teaching.

The Feasibility Study

The primary goal of the present study was to evaluate the feasibility of the Career Teacher Project as a generalizable and appropriate model for teacher education through the consideration of three feasibility dimensions: administrative, educational, and human factors. The main question to be answered was, "Is the program exportable in an operational form suitable for use as a regular part of a college or university teacher education program?"

The methodological rationale for this study was based on two assumptions:

1. Since the Career Teacher Project was an innovative solution to a problem, it could, therefore, be evaluated using the research questions and methods peculiar to the study of educational change and diffusion of educational innovations.

2. An "open" or field research design would be needed to make observations and collect data using the research approach mentioned above.

The study of educational change or diffusion of educational innovation has gained prominence since the development and testing of post-Sputnik educational programs, i.e., programmed instruction.[30] The approaches were borrowed largely from rural sociology research investigating the acceptance and rejection of agricultural innovations,[31] resulting in studies which illustrate, for example, comparisons between the diffusion of modern math and of seed corn in the same geographic area.[32]

The determination of factors already identified as necessary in the consideration of educational innovations was a reasonable first step. Matthew Miles, in presenting a number of case studies and research projects in educational change, enumerates several factors relevant to this present study and observes that "educational innovations are almost never installed on their merits."[33] However, merit, presumably educational effectiveness or feasibility, seems to be a necessary consideration since it would not seem logical to adopt an unsuccessful program just because it is cheap or is perceived as nonthreatening to teachers.

Miles' basic list includes the following considerations:

1. Cost
2. Technological factors
3. Associated materials
4. Implementation supports
5. Innovation system congruence[34]

These factors refer to qualities of the innovation and ease of fit of the innovation in the adopting institutional contexts. As such they represent status descriptions. The actual process of changing methods of bringing about innovative practices and the adoption of actual innovations requires consideration of different factors including innovative persons and groups,[35] organizational health,[36] and communications processes.[37]

Among the studies that have been undertaken to investigate the feasibility of educational innovations, one titled, "A Field Demonstration of the Effectiveness and Feasibility of Early Admission to School for Mentally Advanced Children,"[38] makes direct use of the factors suggested by Miles. The investigators, in fact, use the Miles listing as their basic criteria for determining the feasibility of the innovation.

By and large, one of the major factors in determining the administrative feasibility of an innovation is that of cost. Referring specifically to teacher education, Schueler and Lesser state:

> In an applied area such as teacher education, research must be reviewed with both hypothesis-testing and potential implementation in mind, and the balance between costs and payoff becomes an important consideration.[39]

Jones and Barson, in conducting a study of instructional media applications in college courses, consider cost a critical factor and present suggestions for the use of cost accounting procedures to gather and evaluate necessary data. They suggest an approach involving the costing out of pilot form of a project and using this data to predict analogous costs in operational applications.[40] Jones points out the limitations of the cost accounting approach in trying to get at instructional costs of individual courses when faculty time, salaries, and support costs are needed factors. As Jones states, "We do not yet have a way to make detailed cost identifications without a degree of minuteness in reporting resource usages which we (university faculties and administrators) appear to be unwilling to accept."[41] The general conclusion to be drawn is that academic departments, especially faculty members, are not oriented to keeping time logs of their activities and expenditures, and, further, have no desire to do so.

In addition to cost considerations as a determiner of feasibility of an educational program, "educational effectiveness and organizational consequences are all relevent issues to be weighed by university administrators," according to Jones.[42]

The problem of obtaining cost figures mentioned by Jones is one example of the kind of variables with which the educational change researcher must contend. Feasibility studies, like other examples of the study of educational change, are likewise concerned with several criteria or variables. Such studies should be based on a methodological rationale that allows for the study of these variables as they occur and are best made in the field usually involving various types of status observations, such as interviews, questionnaires, and attitude scales.

Because the multitude of variables cannot, nor should not, be controlled as in a laboratory experiment, the field study may be considered "experimental" to use Guba's term.[43]

According to Guba, the experimental study is concerned with all variables present in the program under study. In the laboratory, the investigators would try to anticipate and control these variables; in the field such variables are invited.[44]

This particular feasibility study may be considered as an experimental field study concerned with those variables and factors which affect or influence the feasibility, administrative, educational, and human factors of the Career Teacher Project. An advantage of the field study is that it approaches realism more closely than in a laboratory experiment in which some variables must be controlled. Kerlinger speaks to the factor of realism and states that:

> Realism . . . increases the strength of the variables. It also contributes to external validity, since the more realistic the situation, the more valid are generalizations to other situations likely to be.[45]

The ability to generalize in a valid way from the pilot study data to projected or extrapolated applications in this study is an important need in order to provide realistic guidelines for ultimate decision-making regarding the feasibility of this innovation.

In conducting a feasibility study of the Career Teacher Project, an attempt has been made to examine the pilot study in terms of the factors most likely to affect feasibility. Attention has been given to questions which have been asked about various types of educational innovations; other questions have been generated from the program itself. Conclusions from the pilot study data have been extrapolated to provide consideration of maximum size applications of elements of the program in regular teacher education programs.

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CHAPTER III

RESEARCH DESIGN AND PROCEDURES

The purpose of this study was to analyze the Career Teacher Project according to administrative, educational, and human factors feasibility criteria and to provide guidance for university and school district administrators who might wish to consider adoption of all or part of the Washington State University-Bellevue model.

Research literature in the field of educational innovation and change processes supports the notion that an innovation that is flexible in terms of component linkage and use is more easily adapted to the needs of individual users. The Career Teacher Project was investigated in terms of the major divisible aspects of the program on the assumption that divisibility is an aid to flexibility. Considering the possible operational applications of the program, it is likewise conceivable that a component or subsystem that was employed on campus might be more feasible in an in-district application. Therefore, in extrapolating from the pilot data, such alternatives were considered.

Since the investigation was concerned specifically with the internal and external linkage feasibility and merit of the Career Teacher Project, this study was not intended to be comparative in nature. The objectives of the Career Teacher Project, for example, were concerned with the instrumentals or technology of teaching and were different from those of the regular course with the same number and title, which was essentially foundational. Such a difference makes the two approaches, the experimental and the conventional, fundamentally noncomparable. Thus, a comparison of different means to different ends would seem to be of little value.

Design of the Feasibility Study

This study was designed as follows:

1. A need for a feasibility study was identified.
2. Feasibility dimensions were developed in general terms.
3. The program was analyzed and divided into appropriate program elements.
4. Each characteristic or element was examined in the light of appropriate feasibility criteria and questions were generated within each category.
5. Procedures and instruments were developed to gather data needed to answer feasibility questions.
6. Observations were made and data collected during the field-testing of the project.
7. New questions were asked and answered as new needs were generated from program operation.
8. The pilot data were analyzed and extrapolated in terms of maximum operational applications and reported.

Population Sample

The students, or M-STEP interns as they were called, were preselected by Bellevue School District personnel during January of the semester preceding their senior year. Since the prospective candidates were juniors, their recommendations files were not complete, and they had not yet finished the prescribed sequence of education courses. As a result, the Bellevue interviewers made their judgments on other factors. These included student experience working with children, desire to teach in Bellevue, commitment to teaching as a career, and subject matter preparation and grade level. Since the interns were to be prehired by Bellevue, the selection interview took on the aspects of a recruiting or employment session.

Out of 100 applicants, 30 students were finally selected. In choosing 30, the selection personnel anticipated a dropout of 5 which would still leave a large enough sample to be used effectively in later statistical comparisons. Actually, only 2, a husband and wife combination, dropped from the program before the beginning of the fall semester. Of the 28 who started in the fall, all completed the year-long program.

One of the original problems in determining the pilot group for the study involved the selecting of a pure and representative sample in view of prospective research activities to be carried out in the study of the results of the Career Teacher Project. One argument was for a heterogeneous group which would approximate the other groups in the student teaching centers and the population at large of prospective student teachers.

Bellevue, however, was interested in hiring top-level candidates and would have preferred a more homogeneous group skimmed off the top of the total pool of applicants. This, however, would have necessitated some sort of matching procedure in conducting future research studies. The final selection decisions were made, however, on the basis of the factors listed above, i.e., experience with children, etc., an approach deemed satisfactory by both groups.

General Description of the Program

The Washington State University-Bellevue Career Teacher Project was a joint attempt by a university and a public school district to train teachers to acquire, practice, and demonstrate performance-centered teaching competencies both in a laboratory and classroom setting.

The training objectives for the program were based on 25 behavioral tasks which were developed as descriptions of what teachers do when performing effectively. During the fall semester of the year-long program, 28 seniors completed a series of 15 behavioral tasks. Each task was developed on a model similar to the generalized model found in Appendix A. Specific task systems are also found in Appendix A.

Each student in the group began each task with a preassessment of his or her pretraining competencies. He then completed specific activities and culminated his task experiences by demonstrating his proficiency on a criterion task. This performance was evaluated by a university staff member with whom the student worked during the semester. Activities completed by students in acquiring behaviors included viewing filmstrips, studying text materials, engaging in peer evaluation of one's own work or the work of others, and teaching a short lesson segment before a television camera and a small class of local school children.

Two important characteristics of this program were a focus on the behavioral acts of teaching, e.g., determining and modifying learning objectives, interacting with students, etc., and the use of an individualized mode of instructional systems.

Throughout the fall semester the students, who were registered for two education courses in addition to other work, used and worked with materials such as curriculum guides and textbooks that they would actually use in Bellevue during the second semester.

The second semester experience took place in Bellevue, Washington, and was more than the conventional student teaching experience. Again, students were registered for education course work in addition to the block of credit allowed for the student teaching activity. During this period, the student worked closely with his supervising Bellevue teacher, with a university staff member in residence in Bellevue, and with other university staff responsible for the education courses in which the student was registered. As part of the second semester program, the 28 interns also began work on a proposal for a scholarly study in their field of interest which would serve as a focus for the post-baccalaureate or fifth year part of the program.

Upon graduation the students were employed as beginning teachers in Bellevue. Provision has been made for released time and in-service assistance to help these new teachers further develop and refine their teaching skills.

Program Elements and Feasibility Considerations

University-District Cooperation

Description

One of the most fundamental needs to be satisfied by the Career Teacher Project was that of better articulation and integration of preservice and in-service learning experiences for the prospective teacher. An attempt was made to meet this need through cooperative planning, implementation, and evaluation of the program.

Washington State University and Bellevue teams met at various locations from the fall of 1966 on at approximately monthly intervals to plan objectives, activities, and evaluative approaches to be used in the year-long field test. Planning activities included forming of a coordinating committee; development of behavioral objectives for the program; working out joint commitments, including an agreement to prehire students selected for the program; selecting of students; and designing and conducting an in-service orientation and training program for cooperating teachers and other specialists. This cooperative spirit was continued throughout the field test through frequent visits and communications and the appointment by the university of a resident coordinator.

Administrative Feasibility

The concept of formal cooperation arrangements between teacher preparation institutions and school districts to facilitate teacher education efforts is not new. However, the degree to which such cooperation is necessary to mount and support an effort like the Career Teacher Project is of sufficient significance to warrant a study of the administrative feasibility of such an arrangement. Cost is a primary consideration since time and travel would be required to develop and sustain working arrangements between teacher preparation institutions and public school districts.

The principals in the Career Teacher Project represented an extreme case of geographical separation, some 260 miles bisected by a mountain range. There were travel costs and per diem support incurred each time a meeting was held. An important question was:

1. What were the costs of initiating and supporting this relationship and what might be the cost of similar relationships in an actual situation in which an institution may have working agreements with a number of districts?

Educational Feasibility

A great deal of time and effort and some money went into the joint development of a teacher training program that was conducted both on a university campus and in a school district. In relation to educational feasibility:

1. Did this cooperative arrangement pay off in terms of the attainment of program goals?
2. Might similar arrangements work also?

Human Factors Feasibility

A large number of people besides a planning committee are required to make a program work at the operational level. Although the basic planning was accomplished by a small number of university staff and school district administrators, the supervision and evaluation of the interns were the responsibility of district teachers and university staff not directly involved in the planning of the program. Relevant questions were:

1. What was the reaction of the supervising teachers to the program?
2. What were the reactions to the program of university staff members who might later be expected to participate in the operation?

Performance-Centered Objectives

Description

The basis for the Washington State University-Bellevue Career Teacher Program was a set of behavioral tasks which represented teacher competencies to be acquired and demonstrated by the learners. These tasks were developed jointly and the listing has been recognized by the State Department of Education as at least model standards for teacher education programs in Washington. Both university and school district personnel cooperated in the development of the tasks (see Appendix A).

Administrative Feasibility

The question of adopting a performance-centered approach to teacher preparation and certification is an administrative one to the degree that new personnel might be needed or regular personnel trained to initiate and implement in-service training based on this rationale. Since the new guidelines are moving toward a performance standards basis for preparation and certification and since the State Department of Education considers such training to be the work of teacher preparation institutions and public school districts, involvement by both organizations seems likely. Questions asked were:

1. Did the use of performance-centered objectives raise questions of administrative feasibility in the pilot project?
2. Is it feasible for colleges and school districts to base teacher preparation and certification programs on performance standards if they are not doing so?
3. What in-service training needs would occur if this type of program were adopted?

Educational Feasibility

Since the behavioral tasks provided the basis for all subsequent program learning activities and evaluation, it would seem necessary to investigate the educational feasibility or capacity of these objectives and activities to accomplish the overarching goal of the preparation of competent teachers. The main question was:

1. Were these objectives appropriate and adequate in terms of the main goal, the production of competent teachers?

Human Factors Feasibility

The top administrators from both groups, who presumably represented the innovative strengths of each organization, may have had little trouble agreeing on the acceptance of a performance-centered approach to teaching and teacher education and evaluation. However, the students in the program, the university staff (if not represented in the coordinating and planning group), and the lower than top-echelon school personnel may, conceivably, have known less about the performance rationale.

Further, the approach, with its emphasis on behavioral definitions and the accompanying connotation of behaviorism, might have been less than acceptable to the staff members.

Thus, it seemed necessary to assess the attitudes of the personnel involved in the pilot project in relation to this behavioral approach. The main question was:

1. Did staff and students accept the behavioral objectives base for the program?

Instructional Systems

Description

Students, in beginning the fall semester program, registered for six hours of education courses. These were Education 401, educational measurement, and Education 403, social foundations of curriculum. These course numbers and titles were the same as two courses offered in the regular teacher education program. The time block set aside for the program was 9:00 A.M. to 10:00 A.M., Monday through Friday with an 8:00 A.M. hour added on Thursdays for film viewing with the regular Education 403 class.

The group of 28 students met in a large classroom in the instructional media laboratory complex in Cleveland Hall. Another room was available for using instructional media, such as filmstrip-tape components. The Education Library was available for student use and was located across the hall from the classroom area. During the interaction task activities (microteaching), interns used the facilities of the closed circuit educational television studio, also in Cleveland Hall.

The main activities first semester consisted of a series of 15 behavioral tasks (see Appendix A). Each of the tasks was based on a learning model which itself included the major categories of task competencies that the students would eventually master (see Appendix A). Included in each task system were the following elements:

1. A behavioral statement of the competency to be acquired and demonstrated.
2. A preassessment test which indicated to the student which would be the most appropriate activity to begin considering his background knowledge as demonstrated on the pretest.
3. A choice of activities in which to gain knowledge, comprehension, etc., and a means of practicing the task behavior.
4. Self and peer evaluation of efforts.
5. A criterion task which would be performed by the student and evaluated by a staff member. Upon successful completion of this task, the student would then move to the next task.

The systems varied in difficulty, length, and media utilized. Tasks were organized under the following categories:

1. Determine objectives
2. Modify objectives to meet individual needs
3. Select media which implement appropriate practice of the desired pupil behavior.
4. Organize the learning environment
5. Interact with students
6. Evaluate pupil progress

Appendix A illustrates both simple and complex task systems.

Systems were designed for an individual mode of instruction, although joint viewing of filmstrips and peer discussions were not discouraged. There were no formal deadlines set except for the scheduling of microteaching tasks, the latter an administrative expediency. Students were permitted to work on more than one task at the same time as the semester wore on, as this seemed to have some motivational benefit.

Staff duties consisted in the main of developing and revising systems, coordinating learning activities, providing individual help when needed, and giving evaluative feedback to the students. In short, the university staff personnel were teaching in the same manner in which the students were learning to teach.

Administrative Feasibility

The use of instructional systems methods as the structure for teacher preparation work is a new approach. Conventional patterns generally consist of large group lectures followed by smaller group discussions and individual study. College courses are developed and staff assignments made on this more traditional approach. Use of the systems approach meant that the course structure would be changed and that instructional and support staff would assume new duties and modify and discard some old ones.

With the systems approach and the emphasis on individualized learning, there is a corresponding need for individual study and practice spaces.

The commitment to the systems approach necessitated several important considerations as to the administrative feasibility of such a mode of operation. Necessary questions were:

1. What were the staffing requirements for the fall semester systems activities?
2. What did the staff do and how much time was needed for these duties?

3. Which tasks and time expenditures in the fall semester program might be considered to be of a one-time research and development nature?
4. What was the cost of this new deployment of staff and facilities and what generalizations might be made to other operational applications involving this method of learning?
5. What facilities were needed and would be needed to carry out the systems approach with a larger number of trainees?
6. Did use of the systems programming rationale which assumes that all entering students will succeed cause any problems with reference to grading in terms of the traditional grading and credit granting procedures of the university?
7. Should systems work be limited to an on-campus environment or might behavioral tasks be completed in the district at a residence center, for example?

Educational Feasibility

The task systems approach provided the vehicle for the instruction of the 28 trainees in the Career Teacher Project. The competencies which each student was to acquire and demonstrate were stated in the form of behavioral objectives, i.e., the student will be able to "write behavioral objectives for learning activities appropriate to your field of teaching." At the completion of each criterion task, the student was evaluated on the basis of minimal standards (successful-unsuccessful) set for each task.

The competencies that the students demonstrated during the fall program were to be further demonstrated and refined during the second semester activity and, hopefully, throughout his career. The major question of educational feasibility raised was:

1. Were the systems effective in assisting the student to demonstrate desired behaviors?

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Human Factors Feasibility

The systems approach is a relatively new concept in university education and in the programs of the majority of the public schools. As with most new things, especially educational innovations, there are both predictable and unpredictable reactions. The systems approach, as used at Washington State University and as might be used elsewhere, was a different approach to teaching and to learning. The man in the man-machine system had new duties. Contacts with students changed, often for the better. The students themselves had generally learned in a more traditional pattern up to the point of their entry into the system. Some necessary questions were:

1. What were the reactions of university staff members to the systems approach?
2. Were there really changes in duties and how were these changes perceived by the staff members?
3. How did the students react to learning via the individual mode systems approach?
4. What were the perceived advantages and disadvantages to the students of working this way?

Microteaching

Description

The listing of behavioral tasks contained five tasks under the categories of interacting with students. To facilitate such interaction, students taught short lesson segments to small groups of public school students recruited for the purpose. The basic structure of the tasks was based on microteaching activities developed at Stanford University. The term "microteaching" refers to the idea of teaching a small lesson in order to demonstrate one specific behavioral competency at a time.

Each student, in preparing for his microteaching assignment, developed a lesson through which he would demonstrate the particular type of interaction called for, i.e., elicit responses from pupils indicating the application of a previously comprehended abstraction to the solution of a problem situation. The student then demonstrated the behavior by teaching the lesson and eliciting the desired interaction response from the small group of school children. The lesson was videotaped and played back for the student and a staff member who acted as a coach. After the playback session, the student would revise the lesson and reteach it to another group of pupils. Time permitting, this retaught lesson would also be played back and a final critique provided.

The microteaching sessions provided more realism than did the other activities. However, this realism was obtained at considerable cost both in time and money. After the first sessions, it became necessary to revise the procedure and to settle on one taping and playback. The change in procedure represented a major deviation from the Stanford model; however, the process was still referred to by the now generic term "microteaching."

Administrative Feasibility

The microteaching operation was the most difficult and complex program element to support. Since this activity involved large numbers of students at one time as well as public school pupils, there were significant scheduling problems. To investigate the administrative feasibility of this program component, the following questions were asked:

1. What did the operation cost (including staffing, equipment, supplies, payment to pupils, etc.)?
2. What constraints or limits were and would be placed on the program due to the time available, availability of students, location of the institution?
3. What is the likelihood of the activity being feasible in a larger application?

Educational Feasibility

Since the microteaching tasks represented a specialized form of the other tasks systems, the same questions applied and were asked.

Human Factors Feasibility

Preliminary observation of the microteaching operation indicated general satisfaction with task activities, although the logistical problems seemed overwhelming at times, both to students and staff. One significant aspect of a personal nature was the experience of seeing one's self on videotape for the first time. Questions asked were:

1. What were the reactions of students and staff to the microteaching experience?
2. What were the perceived values of the program?

Sensitivity Training

Description

One of the concerns about the fall semester program was the individual mode of learning wherein the students worked on their own on most of the task assignments. Since this was a new experience for most, it was decided to build in a group interaction component. It also seemed desirable during the first semester to provide experiences for the interns in the dynamics of individual and group understanding and sensitivity.

An attempt was made to accomplish these goals through the medium of three sensitivity or "T" groups composed of the 28 students in the project. Each group of nine or ten students met one hour a week with a member of the staff of the Student Counseling Center. The counselor was a specialist in group interaction and sensitivity training. The meetings were unstructured and attendance was optional.

Administrative Feasibility

The sensitivity training segment of the fall semester program was not a major one and did not tax either staff time or facilities of the Department of Education. However, if this activity were to be used with significantly large numbers of trainees, i.e., 200 or more students per semester, then a question of feasibility would need to be raised.

Educational Feasibility

No records were kept of sensitivity sessions and the group meetings were not discussed with the instructional staff. The activity was not designed to facilitate the accomplishment of any of the behavioral objectives of the program. It was not, therefore, deemed necessary or possible to investigate the educational feasibility of the sensitivity training activity.

Human Factors Feasibility

Since the purpose of the sensitivity training sessions was to provide group guidance for the interns, the human factors consideration was considered as most important. This type of training in which individuals attempt to develop sensitivity and understanding about themselves and others through a free and unstructured group interaction and in the process strip away personal facades and defenses, affects different individuals in different ways. Pertinent questions about this activity seemed to be:

1. What did the individual students feel about their experiences with sensitivity training?
2. What, according to the students, were the advantages and disadvantages of such experiences?

Study-Observation Time

Description

The second semester activity, which took place in Bellevue, was designed as a means of providing an opportunity for the 28 interns to practice and demonstrate in the classroom the competencies they had acquired in the laboratory setting of the campus. The students spent the entire semester in Bellevue in a combination teaching-study program. The study dimension was conceived of as a source of time for planning the lessons that would be taught in the classrooms, both during the senior year and in the following internship year also. Students were to be encouraged to make observations in other classrooms in the district.

One potential advantage of the semester-long program was that it would enable the students to phase into their teaching responsibilities gradually. Table I illustrates the proposed plan for teach-study activity.

TABLE I

PROPOSED SCHEDULE FOR STUDY AND TEACHING

Month	Study	Teaching
February	Three-fourths	One-fourth
March	Two-thirds	One-third
April	One-third	Two-thirds
May	One-fourth	Three-fourths

One problem that needed to be reconciled in terms of the total semester in Bellevue concept was that of credit and course requirements. Interns were completing their senior years of college and needed varying amounts of credits for graduation. In the regular program, students practice teach for a one-half semester block and take a number of one-half semester courses during the remainder of the semester.

In order that all students be able to graduate as planned, an arrangement was made whereby staff from Washington State University offered courses in Bellevue. The assignments connected with these courses and the class meetings themselves were to be accomplished during the block of study time. Another task to be accomplished in Bellevue and for which credit was allowed was the development of a proposal for a scholarly study that might serve as the focus for the students' fifth year program.

Administrative Feasibility

The main questions in regard to the feasibility of this element of the program were concerned with the impact of a semester-long internship experience on the total program structure of a teacher training institution.

1. Was the time utilized properly?
2. Is a whole semester in the field necessary? feasible?
3. What appears to be the best use of such a block of time in an operational situation?

Educational Feasibility

The idea of providing extra time for the student to prepare for teaching and to phase into teaching responsibilities seemed a potentially useful way of combining theory and practice. The question that appeared to be most appropriate was:

1. Did the arrangement provide an effective vehicle for the attainment of program objectives?

Human Factors Feasibility

The semester program in Bellevue was a departure from regular student teaching programs both in length and intent. Students were to work with their supervising teachers and on their own at varying times and in different ways to develop their teaching competencies.

1. Did the teachers supervising the interns accept this new block of study time procedure and perceive it as different from the regular student teaching period?

2. Did the teachers make an effort to participate and cooperate with the interns in this new approach?

Classroom Teaching

Description

The actual in-classroom experience of student teaching has been considered one of the most important facets of the entire teacher education program in most institutions. Some consider this the only really necessary professional education course. In the Career Teacher Project, the classroom teaching dimension was considered less as a capstone of the program but more of a keystone because of the integral use of the experience as a way of connecting preservice work of the intern with his first years of teaching.

As described in the preceding section, the classroom teaching component was a part of a semester-long program which also included time for study and observation. These two activities were related in terms of a time ratio of one activity to the other throughout the semester, culminating with a high percentage of time spent teaching and a lesser percent spent in study and observation.

Perhaps the most important aspect of classroom teaching was that here for the first time the interns had an opportunity to practice and demonstrate their teaching competencies over a sustained period of time under real conditions. The classroom teaching phase had been planned as an integrated part of the total program and students had been given their class assignments during the spring before the project began. They had met their teachers and many had visited their future classrooms at the beginning of school in the fall. The interns had also used appropriate Bellevue curriculum materials in preparing task assignments during the fall semester.

Administrative Feasibility

The main consideration seemed to be the basic problem of scheduling students for an entire semester off campus and the implications of this procedure in terms of the rest of the program.

Educational Feasibility

As mentioned, the teaching component has generally been accepted as being of considerable educational value. Logically, the most appropriate type of practice of the task of learning to teach children would be teaching children. The main question asked was:

1. Were the students able to demonstrate their teaching competencies in the classroom setting?

Human Factors Feasibility

One of the distinct features of the project was the provision for an entire semester in Bellevue. This meant that the students in the program would spend the last semester of their senior year off campus. Appropriate questions seemed to be:

1. How did the students perceive this arrangement in terms of their own plans and needs?
2. Is an entire semester off campus feasible in terms of the students involved?

Supervision and Evaluation

Description

One of the goals of the project was that of continuous evaluation of student progress in the acquisition, practice, and demonstration of specific teaching competencies over the period of the entire year. To achieve this end, interns completed 15 behavioral tasks and were evaluated upon completion of each task. These skills were to be further developed and refined during the internship semester in Bellevue in actual in-class situations.

During the internship period, evaluation was provided by supervising teachers, the interns themselves, and to a limited degree by the project coordinator. Since the project coordinator had assisted in the design and evaluation of the on-campus tasks and of the behaviorally oriented evaluation form to be used, it was assumed that he possessed the competencies needed to make valid, reliable judgments of the interns and of the supervising teachers' ratings of the interns.

Likewise, the interns had also completed the tasks at the university and had received feedback as to the success of their efforts. In addition, the interns were asked to submit sample assignments related to their Bellevue planning and teaching responsibilities. These assignments were evaluated as to whether the interns' work reflected the performance tasks of the first semester, at least as cognitive levels above the comprehension level.

One of the elements of the spring program which was different from the procedures in the regular student teaching program was the nature and type of evaluation carried out by the supervising teacher. In the Career Teacher Project, teachers were asked to evaluate interns on the basis of the behaviorally stated performance objectives and competencies first acquired at Washington State University. The rationale for the evaluations made by the supervising teachers was explained as follows in a memorandum from the project coordinator to the supervising teachers:

> 1. Evaluation is necessary to gauge the progress, growth, and effectiveness of the intern and the effectiveness of the program.
>
> 2. Evaluation should be geared to the intern's progress through the total years' program and should focus on the agreed upon behavioral competencies which are associated with the effective teacher. These competencies, developed by WSU and Bellevue staff, were an important part of the fall in-service program in Bellevue.
>
> 3. There are other dimensions to teaching not emphasized in the WSU semester which sometimes make the difference between success and failure. These include such things as personal initiative, attitudes, and human relations. These, too, should be given important consideration in any evaluation of the intern.
>
> 4. Evaluation should be continuous, therefore, frequent and can be best accomplished by the supervising teachers and the intern himself. Though the college coordinator's evaluation has some value, it cannot provide the continuous, frequent type of assessment that is possible through daily teacher-intern interaction.

The critical variable in the continuous evaluation process was the supervising teacher. The teachers had not completed the behavioral tasks as had the interns nor had they been preassessed as to their knowledge of and ability to apply behavioral criteria in evaluating student teacher performance. Supervising teachers had, however, attended a series of in-service meetings designed to orient them to the objectives and activities of the program.

An important aspect of the cooperative nature of the Career Teacher Project was the assignment of a resident supervisor-coordinator to Bellevue to administer program activities in the district location. The main duties of this staff member were to:

1. Represent the university in matters of coordination and articulation between Washington State University and Bellevue. This task included working with the Bellevue Director of Personnel on the prehiring and placement of interns in Bellevue teaching positions for the coming year.

2. Supervise and evaluate the work of the 28 interns throughout the semester.

3. Conduct meetings and seminars with interns and Bellevue staff on problems of common concern.

4. Schedule space, facilities, and provide transportation for visiting instructional staff.

5. Serve as a resource person to the cooperating teachers and to the Bellevue administration. This entailed attending meetings of teachers and administrative groups, making presentations, and answering questions about the program.

6. Communicate with all personnel involved on procedures, practices, and progress of the program through correspondence, telephone calls, meetings, and memoranda.

This position differed from that of the typical resident college supervisor in several respects. These differences, related in terms of the duties of the coordinator-supervisor, were:

1. Responsibility at any one time for a larger number of interns, i.e., 28 versus 15-18 for other centers.

2. A longer working relationship with the students and cooperating teachers, i.e., one semester versus one-half semester.

3. More direct and deeper working relationships with district administrative personnel due to the joint nature of the project, especially the prehiring commitment. This latter proved quite time consuming.

4. More frequent communication with university as a means of coordinating, scheduling, and supporting the activities of the visiting instructional staff.

5. Coordination and administrative and logistical support of the instructional activities of the visiting staff. This involved acquiring space, resource personnel, materials and equipment, and scheduling activities in terms of both university staff and student and teacher needs.

6. Developing and testing new evaluative procedures needed to provide and insure direct and continuous evaluation of student growth.

Administrative Feasibility

The supervision and evaluation of student teaching by cooperating teachers is at the heart of virtually all student teaching programs. However, the conventional programs, as reported in the literature, are not coordinated or articulated by teacher preparation institutions and school districts in terms of providing a program of continuous training and evaluation that cuts across time and locational boundaries. The Career Teacher Project was planned to insure this continuity.

Doing this required a more direct and sustained involvement of university and district staff, especially teachers, who would work with the intern for an entire semester. In terms of administrative considerations, this degree of program integration necessitated, in the case of this project, in-service training for the teachers and expenditures of teacher time over a longer period of time. In order to coordinate the program to the degree that continuity of program objectives was insured, a new type of staff person was needed, with duties exceeding those of the traditional supervisor of student teachers. Necessary questions about the administrative feasibility of this type of supervisory and evaluative effort were:

1. What were the costs of this program of coordination, supervision, and evaluation in terms of the practices of the pilot study?
2. What would be the projected costs and staffing needs for an operational application on a larger scale (more units of interns)?
3. In the case of the resident coordinator-supervisor, which organization should provide this person, the college or the district, and on what scale (full, part-time) and at what cost?

Educational Feasibility

One of the critical factors in assessing the competencies of the students was the evaluation of their efforts by supervising teachers. In a conventional situation, the teachers would observe the student teacher, provide evaluative feedback as to their efforts, and help the student plan future lessons. Any formal evaluation forms completed by the teacher would be characteristics-based than geared to observable performance behaviors.

The Career Teacher Project was based on specific performance competencies that were to be continuously developed and demonstrated through the course of the entire year. It was necessary, therefore, to insure continuity of evaluation if attainment of program objectives were to be assessed. The key to this procedure, to a large degree, was the cooperating or supervising teacher. The teachers were in a position to provide the greatest help on a one-to-one basis with the trainee because of their close involvement in the day-to-day activity of the classroom. They, the teachers, would have more specific instances and examples upon which to make their assessments. Important questions were:

1. Were they competent to evaluate the interns in terms of growth in the specific behavioral competencies that were the bases for the program and the standards of effective teaching?
2. Was the in-service program adequate to train the teachers to work within the context of performance objectives and measures?
3. Is it a feasible assumption to ask teachers to provide this sort of evaluation?

Human Factors Feasibility

By the beginning of the second semester, the students appeared to have acquired a favorable set toward the behavioral competencies definitions of teaching. They had worked through the series of 15 behavioral tasks and were, hopefully, ready to demonstrate their skills in the classroom.

The supervising teachers, on the other hand, had not had a day-to-day experience with this approach. They had, however, visited the campus in October, 1967, and had received an orientation to the program goals, behavioral objectives, and systems procedures. In addition, university and district staff had provided a series of six hour-long in-service meetings to explain details of the program, answer questions, and provide further orientation as needed.

Once in the classroom, the students came under the direct supervision of the cooperating teachers. Although the teachers had been carefully selected and matched with the interns by the district personnel office, no assessment had been made of the teachers' feelings or attitudes toward the behavioral, performance-centered approach of the program and the emphasis on the systems analysis approach to organizing, executing, and evaluating learning objectives. Questions asked about this dimension of feasibility were:

1. What were the teachers' reactions and feelings toward student comments about and attempts to demonstrate specific task objectives in their teaching?
2. Is it feasible to expect teachers to supervise and evaluate according to new standards which may not have been the basis for their own training?
3. To what degree did teachers' feelings appear to influence the students' actual teaching practices and attitudes toward the kinds of skills they had acquired during the first semester?

Seminars and Group Meetings

Description

A common element in student teaching programs is the weekly seminar or group meeting. The college supervisor and student teachers meet for an hour or two in the afternoon or evening to conduct administrative business, share the week's experiences, and discuss topics of concern to them as prospective teachers. Often this latter activity is organized as a means of providing the student with a foundation upon which to make decisions, select objectives, and in general, operate as a teacher in a particular and real social setting. The group may attend school board meetings, listen to speakers, and often the students themselves will make presentations.

This activity was a part of the Career Teacher Project, also. The coordinator and interns met from 7:00 P.M.-9:00 P.M. on Wednesdays to accomplish routine business and discuss common problems. Program topics included a debate on the proposed district salary schedule by administration and professional association negotiators, a discussion with the Director of Personnel on the subject of contracts and placement, a lecture by a prominent Negro writer on the racial problem, and other subjects of interest and importance to the group. In addition, the weekly seminar provided a vehicle through which the students could meet with each other and share concerns, interests, and a sense of group cohesiveness which seemed to characterize the group.

Administrative Feasibility

This was a common part of the student teaching program and did not necessitate any special considerations.

Educational Feasibility

The weekly seminars were not organized along formal class lines and specific learning objectives were not developed. The content emphasis was on acquiring knowledge about and familiarity with the district and community in which the interns would be teaching in the fall of 1968. There were no educational claims made for this experience so no questions were asked.

Human Factors Feasibility

The weekly meetings were designed as a time for sharing needs and concerns as well as for gaining knowledge. In the light of the solidarity developed by the 28 interns during the fall semester, it seemed desirable to help maintain and support this feeling during the second semester. This seemed especially important since the students were away from other college students and college activities for an entire semester. The question asked was:

1. Did the students find the weekly meetings necessary and desirable in terms of social needs?

University Course Work

Description

Since several students needed credit in addition to that allowed for student teaching in order to graduate, provision was made to teach several courses in the district. University staff traveled to Bellevue approximately six times during the semester and conducted a series of two-hour classes with the interns. Classes offered were an audio-visual methods course, an introductory course in guidance, and two reading courses, one for elementary teachers and one for secondary teachers. Meeting times and facilities were arranged for by the resident coordinator. Central office staff provided resource personnel and materials as needed.

Students and staff met during the school day, usually on a Thursday or Friday with at least one class session each day. Most of the interns took one or more classes, with some taking all of the courses and a few, none. Assignments were made at each session and students would complete them in the interim between meetings.

One proposed advantage of the program was that students, in taking the course work in conjunction with their teaching practice, could prepare assignments that were directly related to their classroom lessons, thus, providing a better bond between course work and teaching practice.

Administrative Feasibility

The first reason for having the in-district classes was that of administrative expediency. Several students needed the credit. Another reason, in terms of the program goals of articulation and integration of course work and actual teaching, was that the courses enabled students to weld theory and practice in the completion of assignments in the classroom contexts, and in the application of knowledge acquired.

This element of the program required staff members to travel considerable distances and spend significant amounts of time. Questions that seemed appropriate were:

1. Was this approach feasible in terms of support costs, especially staffing expenses and travel?
2. Were there any problems in regard to grading and the granting of residence credit for off-campus class work?
3. Could this effort be supported by a college or university which was working with several school districts at once?

Educational Feasibility

The questions of educational feasibility were:

1. Did the students acquire desired competencies through these courses?
2. Was there a relationship between course work and classroom activities?

Human Factors Feasibility

Because of the number of variables to consider in scheduling the in-district classes, it was often necessary to conduct classes during the school day. This meant that the intern would need to leave the classroom for a half day at a time, perhaps two days in a row. It was, furthermore, often necessary to schedule classes with little advanced notice. Since supervising teachers had made plans for intern involvement at specific times, the possibility of time conflicts and the need for compromise was ever present. In reference to these considerations, the following questions were asked:

1. Did the problem of attending classes during the school day cause difficulty for the student in terms of his relationships with the class instructor, the supervising teacher, or both?
2. Did the demands of the course work added to the teaching responsibilities create an excessive work load on the student?
3. What were the attitudes of the supervising teachers toward the dual responsibilities of the interns?
4. Did the study-teaching time ratio prove realistic?

Procedures

Data Collection Instruments

In order to answer the questions posed by this feasibility study, a variety of data were collected using the following procedures and instruments. These included:

Daily Logs

Students maintained daily logs in which they entered the tasks they were working on, the time spent on each task, work area, and comments on the work (see Appendix B).

Facilities Utilization Logs

Work facilities were checked at various times during the first part of the semester to determine space and equipment utilization patterns.

Notes on Daily Student Contacts

Notes were kept on contacts with students on an informal basis with a listing made of general subjects discussed and student comments.

Evaluation of Student Work

Students were evaluated on their performance of criterion tasks for each objective. Records were kept of student completion of tasks and reinforcement and feedback provided.

Evaluation of Stimulus and Content Variables of Selected Behavioral Tasks

The purpose of this instrument was to elicit student reaction to stimulus and control variables associated with each of three selected tasks (see Appendix B). These data were to be used to provide answers to both educational and human factors feasibility considerations.

Evaluation of the Career Teacher Project on the Bases of Selected Instructional Variables

This instrument was administered at the end of the first semester and provided the students an opportunity to comment on factors considered relevant to the instructional program, especially the systems characteristics (see Appendix B). These variables were:

1. Individualization of learning
2. Pacing
3. Learner response
4. Interaction
5. Knowledge of results, feedback, reinforcement, evaluation
6. Closure
7. Function of staff

It was hoped that student comments would provide an indication of individual and group perception of some of the characteristics of the systems approach.

Interview Schedule--Staff

At the end of the first semester, participating staff members were asked for both data about and reactions to the fall program, particularly the systems operation (see Appendix B). Notes were taken during the interviews and later analyzed. In addition, short one-question interviews were imbedded into conversations with other staff members in order to get the flavor of faculty reaction to the behavioral objectives-systems program.

Sample Lesson Plans, Assignments, and Evaluation Items

Students were asked at various times during the second semester to bring to seminar meetings specific items such as lesson plans, strategies for modifying objectives and activities for individual learners, and test questions. These were analyzed for evidence that the students were applying knowledge and skills acquired during the fall semester program.

Student Teacher Rating Scale

This was the standard Washington State University rating scale used by supervising teachers and college supervisors in the regular program (see Appendix B). Although the instrument was not specific enough to assess the behavior of the interns on task objective items, it provided a point of reference and departure for the teachers who were used to using this type of measurement. The next step was to move to a more behaviorally oriented scale.

M-STEP Intern Performance Evaluation

This instrument was designed for the observation and evaluation of teacher performance. It was to be used by supervising teachers, interns, and the college coordinator-supervisor (see Appendix B). The behavior classification and descriptions were taken directly from the behavioral objectives section of the task systems. Students were rated by the three categories of personnel and sessions held to discuss the observations.

Program Evaluation--Second Semester

Students were asked in May to evaluate major elements of the second semester program (see Appendix B). They were to assign a rating of one to five to each element and then to comment on these ratings. This instrument was used to collect human factors data.

Interview Schedules--Interns

During the last three weeks of the semester, each intern was interviewed (see Appendix B). The questions asked were developed from comments made by students and staff and as a result of informal discussions.

Questionnaire--Bellevue Staff

A questionnaire was administered to Bellevue staff personnel through the office of the Director of Research. Questions were similar to those asked the interns and elicited reactions to various elements of the program. An attachment to the questionnaire asked teachers to evaluate their interns' grasp of behavioral task competencies and to provide examples of these tasks, i.e., writing objectives in the affective domain. This evaluation was intended to serve a double purpose as it was considered as a possible indicator of the teacher's own familiarity (at the application level) with the objectives and selected terms.

Costing Data

An attempt was made to collect data as to the costs of the Career Teacher Project operation during the 1967-68 year. Cost considerations included:

1. Instructional and support staff costs
2. Facilities costs and future needs
3. Equipment costs and needs
4. Travel costs

CHAPTER IV

PRESENTATION OF FINDINGS

The main objective of this chapter is to present the findings concerning the feasibility of the program elements of the Career Teacher Project. The basic format follows that of Chapter III and is concerned with providing answers to the questions posed in that chapter. As an aid in answering the basic question of feasibility of each element, certain key questions were generated from the literature and from observation of the program. These questions are stated and considered in the report and discussion of pilot study results.

Program Elements--General

University-District Cooperation

Administrative Feasibility

1. What were the costs of initiating and supporting this relationship?

The cost of formal cooperation on teacher education programs by teacher preparation institutions and school districts would depend on the location of the two agencies, the degree and complexity of the planned program, and the amount and type of research and development needed to initiate the program. The Washington State University and Bellevue Public Schools partnership represented the extremes of each of these factors. The locations were 260 miles apart; the program included both on-campus and in-district dimensions; and the working arrangement and subsequent program development was a first-time effort.

Data presented in Table 2 represent the travel costs of coordinating committee efforts. Travel costs were borne by the State Department of Education in support of the Career Teacher Project as a part of the state's commitment to the M-STEP project.

TABLE 2

TRAVEL COSTS OF MEETINGS RELATED TO UNIVERSITY-DISTRICT COOPERATION

Date of Meeting	Number of Staff (Organization)	Unit Cost	Total
October 8, 1966	2 (Bellevue)	$48.00	$ 96.00
November 9, 10, 1966	3 (Bellevue)	92.00 67.00 67.00	226.00
November 29, 1966	3 (WSU)	23.00 19.00 70.00	112.00
January 19, 20, 1967	4 (Bellevue)	63.00 65.00 72.00 72.00	272.00
February 21, 1967	1 (Bellevue) 1 (WSU)	76.00 99.00	175.00
March 21, 22, 1967	2 (WSU)	23.00 71.00	94.00
May 8, 1967	4 (Bellevue) 1 (Bellevue)	48.00 53.00	192.00 53.00
Total	....	.....	$1,220.00

Meetings were held on a regular basis at both campus and district locations during the 1966-67 school year. Once the program was under way, the coordinating committee no longer met as a group. From that time on, communication was maintained through an in-service program conducted by university and district for the Bellevue staff of cooperating teachers. During the second semester of the program, the on-site coordinator provided the communications linkage between the university and Bellevue.

Several generalizations can be made about the efforts expended and costs incurred in initiating and supporting the Career Teacher Project. These are:

1. The WSU-Bellevue Career Teacher Project coordinating committee provided a necessary system for planning and initiating the project within the structure of the M-STEP operation.
2. The main work of the coordinating committee was largely research and development and of a one-time nature. This work consisted of developing the general program philosophy, hammering out the performance objectives of the program, and designing the basic structure for program operations.
3. The Career Teacher Project was both a part of the state's M-STEP operation and a prospective model for the new certification guidelines. Consequently, coordinating committee members spent considerable time on these considerations during the meetings.
4. Washington State University and Bellevue personnel had had no conventional student teaching agreements or affiliation. It was necessary, therefore, to develop a new relationship between the two organizations.
5. Considering the nature and amount of work accomplished in initiating a new program, this working partnership should be considered as having been a feasible arrangement.

Educational Feasibility

1. Did this cooperative arrangement pay off in terms of the attainment of program goals?

As previously listed, major program goals of the Career Teacher Project were to:

1. Define behavioral objectives characterizing the competent classroom teaching act.
2. Develop teaching strategies and materials to enable future teachers to demonstrate these specific behaviors.
3. Develop and test procedures for integrating preservice training into professional service.
4. Develop techniques for helping the beginning career teacher demonstrate highly competent teaching behaviors.

The joint university-school district approach to planning, implementing, and evaluating a teacher education program appeared to be a successful one. The first three program goals were met; the fourth should be realized during the 1968-69 school year.

Human Factors Feasibility

1. What was the reaction of the supervising teachers to the concept of university-district cooperation?
2. What were the reactions to this concept of university staff members who might later be expected to participate in the operation?

The teachers who carried out the supervision and evaluation of the interns were favorable to the concept of university-district cooperation in the development and implementation of a teacher preparation program. This reaction, assessed through conversations with all of the supervising teachers, was unanimous. Such an attitude seems likely since the teachers involved had volunteered to work with the program initially.

Approval of the concept of university-school district cooperation did not, however, constitute a blanket endorsement for the program itself or for specific elements of the program.

Approximately 80% of the Department of Education resident staff were interviewed informally at various times during the year preceding the pilot study and during the period of the study as well. The subject of departmental participation with Bellevue in the Career Teacher Project was also discussed at faculty meetings during the two-year period of 1966-68. Individual and group reaction to the idea of a jointly planned program was favorable in all recorded instances. Again, this endorsement pertained to the overall idea of a working agreement and did not imply acceptance of all facets of the program.

Performance-Centered Objectives

Administrative Feasibility

1. Did the use of performance-centered objectives raise questions of administrative feasibility in the pilot project?

The decision to base program objectives, activities, and evaluation on the performance competency rationale led to a need for the fundamental consideration of administrative feasibility. This concern was relevant to virtually all aspects of the program. For example, the main work of the coordinating committee meetings was the development of performance objectives and the working out of appropriate terminal objectives and learning tasks.

In addition, few teacher preparation programs, both preservice and in-service, have been based on behaviorally stated definitions of teacher competency. As a result, a fundamental problem facing the program designers was that of finding appropriate strategies and instructional media to facilitate the acquisition and practice of these performance competencies. This problem immediately raised the question of research and development costs.

The performance-centered objectives idea, therefore, was the most elemental cost-incurring factor and, therefore, the basis for all subsequent questions of administrative feasibility in both the pilot project and in potential applications.

2. What in-service training needs occurred because of the performance-centered nature of the program?

The coordinating committee, in developing behavioral descriptions of teaching, were attempting to systematize what has largely occurred in a total, unsystematic way in the classroom. This approach required a close analysis of teaching acts of planning, execution, and evaluation into describable components and behaviors. Twenty-five specific behaviors were identified and defined by university and district staff.

This work led to the development of an articulated and integrated program in which students could acquire, practice, demonstrate, and refine these behavioral competencies across a time line beginning in the senior year and extending in an unbroken manner into their actual teaching careers.

To insure this continuity, it was vital that instructional, supervisory, and evaluative personnel along each step of the way understand the objectives and goals of the program. Further, it was necessary that continuous attempts be made to keep these objectives in focus as the unifying elements of the total program.

Up to the fall of the 1967-68 school year, the personnel who had been working with the objectives were coordinating committee and university personnel who were assisting in the development of the learning systems and evaluations strategies. The teachers who would be providing the supervision and evaluation during the spring semester had not yet become involved in the program. It was necessary to provide an in-service training and orientation program for these personnel, all of whom had been identified and matched with an intern.

The in-service program began in October, 1967, and continued throughout the first semester. Table 3 presents a schedule of meetings along with the travel costs involved.

As the table indicates, all meetings but one were held in Bellevue. The exception was a trip by the supervising teachers to the university campus for the purpose of visiting the interns and observing the systems training first hand.

TABLE 3

TRAVEL COSTS FOR IN-SERVICE MEETINGS

Dates of Meetings	Number of Staff	Cost Item	Cost
Oct. 4-6, 1967	1 (WSU) to Bellevue	Car and per diem	$ 51.12
	1 (WSU) to Bellevue	Car and per diem	64.92
Oct. 19-21, 1967	28 (Bellevue) to WSU	Bus fare (RT)	352.00
	29 (Bellevue) to WSU	Expenses @ $30 ea	870.00
Nov. 8-9, 1967	1 (WSU) to Bellevue	Car and per diem	83.50
Dec. 13-15, 1967	1 (WSU) to Bellevue	Car and per diem	87.00
Jan. 10-11, 1968	1 (WSU) to Bellevue	Air fare	51.00
Total	....	....	$1,559.54

The director of the Career Teacher Project, besides working with the interns on campus during the fall semester, also worked with Bellevue administrators in conducting the in-service training. This dual role required travel to Bellevue on the dates indicated.

The in-service program itself consisted of a series of meetings held at the Bellevue Educational Service Center after school from 4:00 P.M. until 5:30 P.M. The original plan for the in-service meetings was to provide an orientation to the total program activities with emphasis on the behavioral competencies that the students were to acquire at the university and then later demonstrate in Bellevue. After the November meeting, however, it was decided by the program staff that a thorough grounding in behavioral objectives, particularly with reference to the terminology and familiarization with the taxonomies, was not necessary. Instead, the supervising teachers would be responsible for selecting experiences and providing opportunities for the trainees to practice and demonstrate the skills acquired on campus. Any familiarity with behavioral terms needed for supervision and evaluation duties were to be acquired through work with the interns and the coordinator-supervisor.

From the standpoint of cost and logistical feasibility, the only real reason for the cost figures was the geographical separation between Washington State University and Bellevue. Subsequent observation and evaluation of the program seemed to back up and reinforce the decision not to engage in detailed study of behavioral objectives and the hierarchical structure of knowledge and attitudes.

Educational Feasibility

1. Were these objectives appropriate and adequate in terms of the main goal, the production of competent teachers?

The entire program was based on the assumption that given specific descriptions of what teachers do when demonstrating effective teaching, students can then learn to demonstrate like behaviors and, therefore, teach effectively. The end product of this program is a competent teacher. This is likewise the goal of nonexperimental programs also.

For both groups of trainees, the first major decision as to competence rests on the yes-no decision as to recommendation for certification. This recommendation is based largely on the student's success in student teaching as evaluated by the supervising teacher and college supervisor.

To the degree that such initial recommendation denotes competence, all 28 interns reached this point successfully, although not at the same time. A few interns might well have been certified after the first three weeks; others were questionable quite near the end. The main point is that by applying the most basic and common yardstick, namely recommendation for certification, as evidence of the appropriateness of and adequacy of program objectives, then the performance-centered objectives approach must be considered as an educationally feasible way of accomplishing the main goal of teacher preparation.

Factors Feasibility

1. Did staff and students accept the behavioral objectives base for the program?

Whenever the new certification guidelines were discussed , state-wide basis, questions often came up relative to the tability of a behavioral objectives or performance standards s for an entire state's preparation and certification pro- m. It seemed likely that some of the questions voiced by the ral population might also be reflected in the smaller sample ducators and education students who were directly and indi- ly involved in the Career Teacher Project.

To assess the reactions of the university staff to this cept, informal interviews were held with 20 resident instruc- al staff members of the Department of Education at Washington te University. Each was asked the following question: What you think of the behavioral or performance objectives rationale the M-STEP program?

Table 4 presents the reactions of the faculty members to question. Sample responses are also included.

At the end of the second semester, the supervising chers in the project were asked to respond to a questionnaire citing their responses to the program (see Appendix B). Many the choices were open-ended allowing for teacher comment. An lysis of these data failed to turn up any negative comments rected toward the performance-objectives concept.

During the second semester, most supervising teachers re visited several times. Notes were taken of these informal etings. Although the teachers expressed their opinions pro and con on various aspects of the program, no one took issue with the idea of a performance standards approach to teacher education.

TABLE 4

FACULTY REACTION TO PERFORMANCE OBJECTIVES CONCEPT

Attitudes and Sample Responses	Number Expressing
Favorable:	17
"Best . . . idea I've heard of yet."	
"Great! This is the direction we've needed to go."	
"I hope to be able to go through the program myself."	
"Looks like a systematic way of looking at what has been considered a largely unsystematic process."	
"Washington has long needed a way to make the preparation and certification program more systematic."	
Mixed feelings:	2
"The idea is good but we could get bogged down in the rigamarole of this new terminology."	
"Behavioral objectives and systems are in vogue now. I hope these ideas don't overshadow other aspects of teacher education which are equally as important."	
Against:	1
"Entirely too Skinnerian. It all involves a matter of the right quantity of reinforcement contingencies.	

Since the time that the concept of a performance standards approach to teacher preparation and certification was first introduced and discussed as a possible direction for the state of Washington, feeling and opinion has run high on the topic of performance standards. Professionals have been for and against the use of performance objectives and criteria; it has been difficult for individuals and groups to remain neutral or aloof.

Subsequent discussion of the program elements and of the desirability, in terms of costs and results, of all or parts of this program model, spring from and are related to the underlying notion of performance-centered objectives. Serious consideration of the Career Teacher Project model for adoption must, therefore, begin with an acceptance of the concepts of performance objectives and observable evaluation criteria. From this point, staff personnel may then assess the desirability and fit of specific program elements designed to facilitate the acquisition of performance skills.

Program Elements--On-Campus

Instructional Systems

Administrative Feasibility

1. What were the staffing requirements for the fall semester systems activities?
2. What did the staff do and how much time was needed for these activities?
3. What was the cost of this new deployment of staff?

The use of instructional systems raised a need for special approaches to teaching and learning not previously employed to any great extent in the Department of Education. A resultant and significant cost item was the development of the 15 behavioral task systems that comprised the fall semester program. Since this was a new approach to teacher education, existent text materials were of little value in terms of providing needed activities and strategies.

To accomplish the task of program development, doctoral candidates with special competencies in curriculum development and evaluation were employed to assist resident project staff in the following tasks:

1. Searching the literature for promising strategies and media.
2. Designing instructional systems.
3. Editing, testing, and revising systems.

Table 5 presents the time and salary costs incurred by this activity. Costs represent salaries of personnel, the main expense item from the standpoint of the Department of Education. Typing and clerical support was provided on the same basis as for any other course with no costs attaching to a particular course.

TABLE 5

STAFF NEEDED TO SUPPORT FALL SEMESTER SYSTEMS DEVELOPMENT OPERATIONS

Program Activity	Type Staff	Time x Salary	Total Cost
Systems development (after development of objectives):			
Search for promising materials, activities	Research assistant	20 hours per week 4½ mo. x $327.80	$1,475.00
Writing task systems	Systems designer (RA)	Part-time for eight weeks	550.00
Writing task systems	Systems designer (RA)	Part-time for three weeks	300.00
Writing and revising task systems	Systems designer (RA)	20 hours per week 4½ mo. x $327.80	1,475.00
Total	....	......	$3,800.00

The 15 behavioral task systems which made up the fall semester program for the interns were designed for an individual mode of learning. According to this design, individual students could begin at a time and level appropriate to their prior knowledge and skills. Each student could follow his best learning path from statement of objective to demonstration of criterion behavior. Appendix A illustrates a typical task.

The tasks of the university staff person working with a group of interns in a teacher-pupil capacity were essentially the same as those selected as characterizing effective teaching. In other words, the professor was to demonstrate the various categories of behavior which were the bases for the program. These were:

1. Determining objectives
2. Modifying objectives in terms of individual learner needs
3. Selecting appropriate media and strategies
4. Arranging the learning environment
5. Interacting with students
6. Evaluating student progress

Included in these tasks was the job of directing and coordinating the efforts of the systems development team. In addition, the director of the project served as a resource person for the in-service program for Bellevue teachers during the fall semester (1967-68). Table 6 shows instructional time and salary costs of the instructional phase of the systems program less the micro-teaching activities.

In addition to the one staff member who worked with the 28 interns, a doctoral student provided assistance in the instructional program. His duties included attending the class sessions each day, checking on the availability of facilities and equipment, evaluating student progress, and generally being available to help students.

TABLE 6

STAFF NEEDED TO SUPPORT FALL SEMESTER SYSTEMS, LESS MICROTEACHING

Program Activity	Type Staff	Time x Salary	Total Cost
Instruction program direction in-service work	Professor	13-18 hours per week = 1/3 time x $1,383 x 4-1/2 mo.	$2,075.00
Assist with above	Teaching assistant	10-12 hours per week = 1/2 time x $327.80 x 4-1/2 mo.	738.00
Total	.....	....	$2,813.00

In the actual pilot study, the assistant was involved with program to facilitate data collection for a doctoral study and was attending the university on another fellowship. Therefore, there was no actual cost to the university for the $738.00 in teaching assistant services shown above.

4. What facilities were needed to carry out the systems approach?

The following attempts to answer the question of what facilities were needed to support the instructional systems operation of the Career Teacher Project. The microteaching activities, Tasks 18, 19, 20, 21, and 22, involved a separate set of problems and support needs and will be considered separately.

Since the Career Teacher Project was concerned with and implemented in terms of an individual mode of learning, facilities needs were different from those associated with the more conventional lecture-discussion method used in most classes. Table 7 shows a comparison of facilities needed for group and individual modes of instruction.

TABLE 7

COMPARISON OF FACILITIES NEEDED FOR CONVENTIONAL AND EXPERIMENTAL SECTIONS OF EDUCATION 403-404

Activity	Conventional (Group)			Experimental (Individual)		
	Facility	Min	Max	Facility	Min	Max
Lecture	Auditorium	100	150	Not applicable	..	..
Discussion	Seminar room	10	20	Seminar room	2	14
Media viewing	Auditorium	100	150	Room/booth	1	15
Peer evaluation	Not applicable	...	...	Seminar room	2	6

As the table indicates, the individual mode of instruction is characterized by smaller groups of students in any one area with a corresponding reduction in the need for large capacity facilities such as lecture halls.

The one potential problem in regard to the individual mode of instruction concerns the availability of appropriate facilities over a large enough time period so as to provide space and equipment for students working at their own rates. In theory the Career Teacher Project systems were designed to encourage and facilitate individual learning. Study assignments were geared to the individual and sources and media as such were such as could be used on an individual basis.

In practice, however, the realities and constraints of a first-time effort militated against a completely individualized program. Some of these constraints and variables were:

1. Time pressures of the program caused by lack of lead time in system preparation and testing meant that there were occasional delays in getting the new systems to the students. This meant that those students who generally worked more slowly were able to finish tasks and catch up with faster students who, in turn, had to wait for new tasks. When a task was ready for student use, materials were generally laid out on a large table and most students would pick these up at the same time. The high interest factor coupled with a need to "keep up" often meant that students would begin tasks as a group even though they would later go back to other, unfinished, tasks.

2. Scheduling needs for certain tasks, especially microteaching, required that students leave one task and prepare for the most immediate one at the time. This, too, prevented a truly individualized study pace.

These constraints are reflected in Table 8 which presents facilities utilization data. For the purpose of this study, the critical facility was that of space and equipment needed for viewing and listening to several filmstrip-tape components.

TABLE 8

FREQUENCY OF INSTRUCTIONAL MEDIA LABORATORY USE
FROM SEPTEMBER 28, 1967, TO FEBRUARY 1, 1968

Task No.	Date	No. Using Facility	Task No.	Date	No. Using Facility
1	Sept. 28	4	4	Oct. 17	1
1	Sept. 29	11	4	Nov. 3	1
1	Oct. 2	4	18	Nov. 8	1
2b	Oct. 3	7	18	Nov. 10	5
2b	Oct. 4	11	18	Nov. 13	2
2b	Oct. 5	2	18	Nov. 14	1
2b	Oct. 6	2	18	Nov. 15	1
4	Oct. 9	2	18	Nov. 28	1
4	Oct. 10	1	11	Jan. 22	5
4	Oct. 11	4	11	Jan. 24	3
4	Oct. 12	4	11	Jan. 25	4
4	Oct. 13	10	11	Jan. 26	1
4	Oct. 16	1	11	Feb. 1	1

As the peaks of viewing activity and facilities usage indicate, the students began the first two tasks as groups with more viewing spread noted with Task 4 and succeeding tasks. Facilities were utilized parts of 26 different days. Assuming two hours of use or viewing time per day, the total hours that the instructional media laboratory and equipment were used total 52 hours. Considering a potential use rate of 20 hours per week (scheduled time and "open" time) times 16 weeks, 320 hours were available for facilities use. The actual rate of use, therefore, was roughly 17% of the time available.

One indication of at least some degree of individualization of learning is illustrated by the total number of students who viewed the filmstrips. Even accepting some error in the student daily logs from which facilities use data were obtained, it is apparent from Table 8 that not all students viewed each set of filmstrips. This was especially true of Task 18, the first microteaching task. The task itself was a lengthy one and required a large number of written student responses prior to the actual teaching performance. In their eagerness to get to the actual on-camera experience quickly, several students omitted preparation study entirely. As one student put it, "I got my first look at Task 18 this morning and was frightened by all the pages and the charts. I was in a hurry anyway, so I just started with the part about the lesson plans and worked from there."

In terms of the actual use made of the facilities needed to accomplish the media-associated task activities, there did not appear to be any problems as to availability of facilities for the use of the interns in the pilot program.

5. Did the use of the systems programming rationale which assumes that all entering students will succeed cause any problems with reference to grading in terms of the traditional grading and credit granting procedures of the university?

One administrative hurdle that the project staff faced was that of reconciling the basic successful-unsuccessful evaluating procedures with the traditional grading system of the university. The problem was resolved in a manner which several students felt was unsatisfactory, namely that students were evaluated on a successful-unsuccessful basis on their criterion tasks performances, but were given A, B, C grades at the semester's end.

Future studies or larger applications would seem to require that either multilevel performance criteria be developed for each task or else students by given pass-fail grades for their total effort.

Educational Feasibility

1. Were the systems effective in assisting the students to acquire and demonstrate desired competencies?

Students entered each task system with a preassessment of his behavior. Students then took the appropriate path, through various learning activities, to the final performance of the criterion behavior for that particular task system. Each intern beginning and completing a particular task was able to demonstrate the performance level described for that competency.

The major drawback of the systems was that levels of performance beyond the minimal level were not identified. This resulted in the lack of a more sophisticated measure for determining gradations in performance. Such data might have been useful in revising tasks on the basis of the ease or difficulty in achieving task objectives.

Human Factors Feasibility

1. What were the reactions of university staff members to the systems approach?
2. Were there really changes in duties and how were these changes perceived by staff members?
3. How did the students react to learning via the systems approach?
4. What were the perceived advantages and disadvantages to the students of working this way?

Reactions of university staff to the systems approach to learning was obtained on two levels. First, staff not participating in the project were asked what they thought of the systems and behavioral objectives approach to teacher education. These comments, summarized in a preceding section, indicated a generally favorable reaction. Attitudes on this level were based on knowledge about, rather than involvement in, systems activities.

The more detailed reactions to the systems approach were obtained from the staff who had worked with the students and systems operations on a day-to-day basis. The staff, in this case, consisted of the project director, who had primary instructional responsibilities, and his assistant, a doctoral candidate. Reactions and generalizations were obtained through daily observations, notes, and discussion of the program.

The most noteworthy reactions to or comments about the systems programs concerned the actual duties of the staff.

Essentially, the instructors tried to demonstrate the same categories of behaviors that the students were acquiring and practicing through the system. The main duties of the instructional personnel, as perceived by them, included those behaviors involved in the planning, executing, and evaluating of learning. These duties may be illustrated by a description of a typical daily meeting which generally included the following activities:

1. At 9:00 A.M., students arrive; visit; lay out materials; pick up items that have been evaluated and submit new written tasks for evaluation; pick up new assignments.
2. At 9:10 A.M., professor or assistant makes any pertinent announcements; calls student attention to new tasks ready for pick up; asks for questions.
3. At 9:15 A.M., students work on own projects individually or in small groups, in room, or elsewhere, for remainder of hour; view filmstrips; seek peer evaluation; ask staff questions.

During the 45 minutes of work activity, the staff circulate, stopping to ask or answer questions, provide feedback. Little or no time is spent dispensing knowledge unless such activity has been designed into the task system. Students may wish to have portions of their work evaluated to provide a more immediate knowledge of results rather than waiting until the entire criterion task has been completed.

As was noted in the previous consideration of facilities, not all the group would be present each day. Since students also attended sensitivity training at various times during the week, the group was seldom up to full strength in numbers. This factor tended to enhance the faculty-student ratio.

A second by-product of the mobility of the group was the establishment, at mid-semester, of a "togetherness" period once a week. General announcements were consolidated and presented at this time and questions answered and group problems discussed. The staff and several of the students felt that this period, whatever the stated reason for its existence, was in reality a way to further group identity and possibly security.

The most apparent and dramatic difference between the systems group and a regular class was the absence of the lecture or lecture-discussion format. Whereas this change was noted by the students who were completing their fourth year of college method according to the lecture method, it was even more obvious to the former chief performer, the professor, and to the teaching assistant, a former high school English teacher.

On one occasion, the professor was asked how he perceived his new role. His answer, only partially in jest, was: "What role? Sometimes, I wonder if I have a role. It's a little disconcerting after all these years not to go andpresent a lecture." This reaction, a common one in moving from a teacher-centered to learner-centered procedure, is based on the comparison between instructional roles in a systems environment as compared with the conventional lecture approach. As the semester wore on, however, both staff members made something of a transition from lead actor to producer-director roles.

The teaching assistant, although also accustomed to a more teacher-centered instructional role, perceived a better relationship between the staff and students as far as an advisory role was concerned. With the emphasis on individual learning activity and the mobility of the group, there were opportunities to work with more students on a one-to-one basis. In fact, on those occasions where neither staff member was in attendance, students often commented the next day that they had needed the advice of the staff member and requested that at least one person be available at all times during the class sessions.

A better overall look at instructional duties in a systems environment can be acquired through an observation and analysis of the staff's out-of-class activities. These included both developmental and administrative tasks.

1. Systems design in conjunction with other personnel including developing alternate sets of activities based on an on-going knowledge of student behavior in an attempt to individualize the program; selecting and acquiring stocks of study resources, both print and nonprint; and up-dating facilities and equipment needs to meet the demands of the task systems.
2. Scheduling and monitoring of microteaching activities.
3. Evaluation of written tasks on a continuous basis in keeping with the individualized nature of the learning activities and of the individual paces followed by students.
4. Conferring with students.

The Career Teacher Project instructional assignment was not the full load of the faculty member. He also spent time in conducting research and in directing the overall project, including the work in Bellevue with the district staff. Since the instructional responsibilities connected with the project were only part of his total assignment, the professor did not find the change from more classes with fewer hours per student to one class with more students-faculty contact to be a particularly heavy or restricting load.

Both staff members found satisfaction in the program since it provided a chance to teach the way they wanted their students to learn to teach.

Student reaction to the systems approach took two forms. First, students were asked to criticize and evaluate three representative tasks according to a list of variables and to rate each. These data are appropriate in a consideration of educational feasibility since comments are also a user measure of the adequacy and appropriateness of specific tasks and general systems tasks characteristics. Each of the three tasks chosen represent other tasks of a similar type. Task 4 represents Tasks 1-6; Task 10 represents 9-11; and Task 20 typifies Tasks 18-22, the microteaching tasks. Task 20 will be considered in the section on microteaching. Tables 9 and 10 illustrate the reactions of students to the common elements of each of the 15 tasks. Data indicate a favorable reaction to the stimulus and content variables associated with the various tasks.

To elicit student responses relative to the advantages and disadvantages of working in a more individualized approach to learning, an instrument was developed asking for students' open-ended responses and reactions to seven instructional variables which are identifiable in various forms in both systems and more conventional types of instruction. Students were to examine the systems approach in terms of each variable and each variable in terms of systems rationale and procedures. Reactions were then categorized under advantages or disadvantages and further broken down by specific type and frequency of response. Tables 11 through 17 summarize these responses.

TABLE 9

INTERN RATING OF TASK 4, WRITING COGNITIVE OBJECTIVES

Variable	Rating	Frequency of Response
1. Difficulty level of task	Easy	1
	Moderately difficult	22
	Very difficult	3
2. Length of task as related to value of task	Too short	1
	Appropriate	17
	Too long	6
3. Appropriateness of task to program	Inappropriate	0
	Appropriate	26
4. Interest level of task	Low	6
	Medium	16
	High	4
5. Sequencing procedure	Illogical	2
	Logical	23
6. Media, materials, learning activities	Inadequate	2
	Adequate	17
	Excellent	7
7. Self-evaluation strategies, activities	Inadequate	1
	Adequate	22
	Excellent	3
8. Peer evaluation strategies, activities	Inadequate	2
	Adequate	9
	Very helpful	16
9. Staff evaluation strategies, activities	Inadequate	4
	Adequate	12
	Very helpful	10
10. Effectiveness of task	Ineffective	0
	Effective	26
11. Activities completed in task	Few	1
	Some	6
	Most or all	19

TABLE 10

STUDENT RATING OF TASK 10, DESIGNING INSTRUCTIONAL SYSTEM

Variable	Rating	Frequency of Response
1. Difficulty level of task	Easy	4
	Moderately difficult	17
	Very difficult	5
2. Length of task as related to value of task	Too short	2
	Appropriate	13
	Too long	10
3. Appropriateness of task to program	Inappropriate	5
	Appropriate	19
4. Interest level of task	Low	9
	Medium	6
	High	11
5. Sequencing procedure	Illogical	3
	Logical	20
6. Media, materials, learning activities	Inadequate	9
	Adequate	16
	Excellent	1
7. Self-evaluation strategies, activities	Inadequate	8
	Adequate	14
	Very helpful	3
8. Peer evaluation strategies, activities	Inadequate	3
	Adequate	15
	Very helpful	8
9. Staff evaluation strategies, activities	Inadequate	8
	Adequate	9
	Very helpful	5
10. Effectiveness of task	Ineffective	7
	Effective	18
11. Activities completed in task	Few	5
	Some	5
	Most or all	16

TABLE 11

STUDENT RESPONSE TO SELECTED INSTRUCTIONAL VARIABLES, INDIVIDUALIZATION OF LEARNING

Advantages	Frequency	Disadvantages	Frequency
Independent learning facilitated	7	Some tasks inappropriate to individual needs	3
Tasks modified to meet individual needs	5	Tasks not individualized enough; geared to group norms	2
Could skip some subtasks	3	Little individualization; like "all others"	1
Appropriate for seniors	2	Little concern for individual	1
Emphasis on learning	1	Needed more instruction	1
More meaningful	1	Program not adaptable to special needs (speech therapist preparation)	1
Could work at own pace	1		

TABLE 12

STUDENT RESPONSE TO SELECTED INSTRUCTIONAL VARIABLES, PACING

Advantages	Frequency	Disadvantages	Frequency
Could set own pace	10	Needed deadlines	7
Good, satisfying	3	Lacked maturity to develop own deadlines	1
Took getting used to but worthwhile	1	Work piled up at end	1
Was forced to learn how to organize time	1	Some activities did not lend themselves to individual pacing	1
		Felt we had unwritten deadlines	1

TABLE 13

STUDENT RESPONSE TO SELECTED INSTRUCTIONAL VARIABLES, LEARNER RESPONSE

Advantages	Frequency	Disadvantages	Frequency
Varied kinds of responses	7	Needed more small group response opportunities to exchange ideas, notes	4
Small group responses ideal	5	Some tasks required an excessive number of responses	1
Individualized	5		
Frequent; good	4	Needed more feedback after responses	1
Adequate	1		

TABLE 14

STUDENT RESPONSE TO SELECTED INSTRUCTIONAL VARIABLES, INTERACTION WITH OTHERS

Advantages	Frequency	Disadvantages	Frequency
Liked group atmosphere	10	Needed more interaction with staff	5
Good contact with peers	8	Work room "too social"	3
Good contact with staff	7	Afraid to get staff evaluation	1
T-group sessions helped	7	Needed more interaction with peers	1
Social contact satisfying	1	Lack of sophistication in our group	1

TABLE 15

STUDENT RESPONSE TO SELECTED INSTRUCTIONAL VARIABLES, KNOWLEDGE OF RESULTS, FEEDBACK, REINFORCEMENT, AND EVALUATION

Advantages	Frequency	Disadvantages	Frequency
Videotape record good feedback	5	Feedback delayed, not immediate enough	11
Peer evaluation helpful	3	More specificity needed in evaluation	7
Feedback and evaluation excellent	3	Missed letter grades	1
		Needed more criticism	1
Evaluation good, adequate	3		
Staff feedback exceptional	1		

TABLE 16

STUDENT RESPONSE TO SELECTED INSTRUCTIONAL VARIABLES, CLOSURE

Advantages	Frequency	Disadvantages	Frequency
Good sense of closure	15	Hard to see with first few tasks	1
Finally got an idea of relationships of tasks, skills	5	Length of tasks (4,5) delayed closure	1
Videotape recordings helpful	4	Will see better in Bellevue	1

TABLE 17

STUDENT RESPONSE TO SELECTED INSTRUCTIONAL VARIABLES, FUNCTION OF STAFF

Advantages	Frequency	Disadvantages	Frequency
Instructors excellent	8	Needed more staff assistance	5
Always available	2	Needed more one-one conferences	3
Helpful if sought out	2	Too much time spent in clarifying tasks	2
		Needed lectures	2
		Needed more clarification	1
		Not helpful	1

A final measure of student response to the systems program is provided in the results of interviews conducted at the end of the year (see Appendix B). Tables 11 through 17 present data collected. Responses to questions 1, 3, 4, 5, and 7 contain references to systems activities with systems work in behavioral objectives being one of the most frequently chosen as a desirable part of the program.

The human factors data examined by question, by instrument, or in total seem to support the conclusion that individual task systems proved to be a satisfying and positive approach to learning in terms of both staff and students.

Microteaching

Administrative Feasibility

1. What did the operation cost?
2. What constraints or limits were placed on the program due to time available, availability of students, location of the institution?

The microteaching activity was chosen as the medium through which to accomplish interaction tasks. This decision was based on previously successful work with seniors using microteaching techniques.

Prior to the beginning of actual microteaching activities, staff personnel planned possible schedules, estimated needs for public school students, and then set up a program whereby students would be selected to participate, be notified, transported to and from the taping sessions, and paid for their services.

Once the program was under way and the final format and scheduling procedure standardized, a coordinator was appointed to keep the operation functioning. In addition, a regular coach was appointed to handle critiquing and evaluating duties on a regular basis.

The costs of the microteaching operation was not so great as to raise questions about feasibility. It should be recognized that the fall semester operation, at least up to the final compromise program, was largely experimental. Thus, the earlier schedules and procedures may be considered as one-time items. The preactivity scheduling and establishing a pool of interested and available students is a requirement of any such program and would need to be considered in future applications. Table 18 presents the basic salary costs of the microteaching operation.

TABLE 18

STAFF NEEDED TO SUPPORT FALL SEMESTER MICROTEACHING OPERATIONS

Program Activity	Type Staff	Time x Salary	Total Cost
Building pool of students; scheduling; planning	Assistant professor; research assistant	1/4 time x $866 x 1 1/4 time x $420 x 1	$ 217.00[a] 105.00[a]
Coordination of schedule, transportation	Research assistant	2/3 time x $327.80 x 2-1/2 months	545.00
Critiquing, evaluating of teaching	Research assistant	2/3 time x $327.80 x 2-1/2 months	545.00
Technical support	Instructional media technician	1/3 time x $507 x 2-1/2 months	423.00
Total	....	....	$1,835.00

[a] Estimated; no actual cost to department.

The time percentages stated are based on a 40-hour week, salary figures are for one month, and the two and one-half month factor represents the duration of the microteaching activity. The coordinating, critiquing, and technical assistance proved adequate to support the activity in pilot form.

Cost figures for equipment used were not appropriate since existing closed circuit television equipment was utilized. None of this cost was charged to the project, including costs of videotape. The latter cost was borne by the State Department of Education.

Microteaching procedures were developed, tried out, and revised in the light of the time and personnel limitations. At first, it was hoped that each of the five tasks could be taped, critiqued, retaped, and critiqued again for all of the interns in five sessions per task. Further, in order to keep the total days of taping for one task system, i.e., Task 18, within a one-week span, and also to group interns of like grade levels so as to meet personnel needs, it was necessary to tape as many as seven interns in one afternoon session. In addition, it was necessary to recruit three to four coaches for critiquing purposes for each large taping session.

This procedure was dependent on a capability to accomplish simultaneous taping and playback using as many as three cameras and four to five videotape recorders. The use of multiple equipment units was necessary because of the compressed time period in which taping could be accomplished.

Eventually, the variables and problems became unmanageable and unsurmountable. Equipment breakdowns, late arriving students, and a lack of coaches finally militated toward a collapse of the procedure.

A compromise program was developed and was continued throughout the semester. Salary cost figures reflect the personnel necessary to support this latter approach. The new procedure involved a maximum of four interns per session, two elementary interns in the first hour, two secondary students in the second hour. One camera and two videotape recorders were utilized so that only one coach would be needed. The coach then could watch a playback and counsel the intern while another intern was taping. There was no reteach-replay sequence under the new procedure. This led one staff person to object to calling the activity microteaching since the teach-reteach sequence was part of the original Stanford University microteaching format. The modified procedure was, however, adequate to accomplish the objectives of the tasks and the use of the generic term *microteaching* produced no problems.

A problem, more serious than the cost consideration, concerned the type of support required to provide real students as classes for the interns during the microteaching activity. The program, in the earlier and later forms, was seriously limited by two factors:

1. The restricted block of time available for microteaching activities.
2. The lack of a large pool of available students, particularly at the secondary level.

The first problem concerned the availability of public school pupils to serve as microteaching classes. It was decided in order to insure and maintain cooperation with school officials that school children would be asked to participate in microteaching only as an after-school activity with no infringement on the normal school day. This meant that the time period during which these activities could take place was limited to the 3:00 P.M. through 5:30 P.M. time range. This limitation was likewise necessary because television studio technical personnel and critique coaches were not available on a sustained basis after 5:30 P.M. This factor and the interns' schedules ruled out the possibility of evening or Saturday sessions.

As a result of these time limitations, it was necessary to modify the format of the microteaching sequence so as to be able to accomplish the required 28 tapings for each task without having any one task drag on and overlap with the next task.

The second problem or limitation, that of obtaining sufficient numbers of secondary students to act as classes, was, likewise, a serious one. At the beginning of the microteaching sessions, it was hoped that it would be possible to match up interns and groups of high school students that would closely approximate a typical, though small, class. By this arrangement, an intern who wished to teach a beginning lesson in French might have a small class of four or five students with no background in the language. Such a procedure proved unfeasible since it was necessary to obtain two groups (one for teaching, one for reteaching) of students for each group of interns in an afternoon session. To satisfy these conditions, however, it was necessary to find eight students who had had no French. This was further compounded by the fact that each of the other interns in the afternoon session had like requirements. Thus, it might be necessary on a given afternoon to locate students who had no language background but who were studying advanced algebra. The increasing complexity of trying to make a close match of teacher-students combined with a shortage of high school students who were available as needed led to the scrapping of the matching attempts.

The compromise procedure, of fewer interns per session, meant that high school students could participate after school exclusively. This alleviated the time problem although the total number of students available never reached the point where there was a large reserve pool of students.

The final decision as to administrative feasibility of the microteaching program element was that the procedure was too limited operationally to be considered feasible for larger groups. The normal range of time available and the corresponding shortage of available secondary students within the time period would limit future application following the procedures of the pilot study.

Educational Feasibility

1. Were the systems effective in assisting the students to acquire and demonstrate desired competencies?

Microteaching tasks were designed to help students accomplish behavioral goals. Each task had a specific terminal objective to be demonstrated on a final criterion task, and each task system was designed to provide activities needed to enable the learner to proceed from a preassessment of his entry level behavior, through acquisition and practice of the behavior or sub-behavior, to a final performance of the skill.

The real measure of effectiveness of the microteaching tasks was whether the tasks provided a satisfactory means for the acquisition, practice, and demonstrations of the specific skills.

In general, the microteaching tasks were effective because, in most cases, interns demonstrated the desired objectives. Students were able to work individually and effectively within the task structure and develop teaching lessons in their particular specialties at their grade levels. Evidence of individualistic routes through the tasks were apparent throughout the series of microteaching activities, a common one being to eliminate the preparatory reading and concentrate on the planning of the lesson to be presented.

Evaluation of student performance on microteaching tasks was limited to a successful-unsuccessful rating. Evaluators or coaches made verbal comments to the intern during and after replays of the videotapes. Suggestions were made for improvement and these were discussed with the interns. Throughout the evaluation, interns were encouraged to evaluate their own work.

An analysis of notes made by one coach over the course of 60 lessons reveals a wide variety in individual performance with the successful-unsuccessful ranges. Further examination of the performance notes taken on individual students across the tasks indicates differences in performance by the same intern from task to task.

As was the case with the nonmicroteaching systems, there is a need for more precise evaluation on more than the dichotomous successful-unsuccessful level. Models need to be developed for at least three ranges (high, medium, low) within successful category so that coaches and students can see individual performances in relation to a continuum or hierarchy of successful or effective performances.

A factor to be considered in a discussion of educational feasibility is the interaction between the external program limitations (administrative) and educational effectiveness. As mentioned, there were administrative limitations on the program. These were lack of time and scarcity of appropriate kinds of students in the public schools.

The time problem necessitated the omission of the second teach and replay segments. As a result, the intern never got a second chance on the same lesson nor to practice or apply the suggestions made during the critique. An opportunity for reinforcement of skills was thereby lost. In the event that an intern would perform unsuccessfully on a lesson, it was almost impossible to teach the lesson again for improvement. Thus, a few interns had no opportunity to demonstrate an improvement on a given task.

The second factor, appropriate students, caused problems for the interns. On occasion an intern would attempt a lesson planned for future use in Bellevue only to find out that the class had either had the same lesson or else had insufficient background for the lesson content. This in turn affected the overall teacher-student interaction on that task.

Even in the light of administrative limitations, the microteaching systems should be considered as a feasible means of facilitating the acquisition and demonstration of the five specific interaction tasks. Again, this feasibility decision would be limited to the pilot study. Particular items of interest are the student feelings about the appropriateness of the task, staff evaluation of their efforts, and the general effectiveness of the task. (See Table 19.)

TABLE 19

STUDENT RATING OF TASK 20, TEACHING FOR APPLICATION LEVEL

Variable	Rating	Frequency of Response
1. Difficulty level of task	Easy Moderately difficult Very difficult	6 17 3
2. Length of task as related to value of task	Too short Appropriate Too long	1 23 2
3. Appropriateness of task to program	Inappropriate Appropriate	0 26
4. Interest level of task	Low Medium High	2 10 14
5. Sequencing procedure	Illogical Logical	2 23
6. Media, materials, learning activities	Inadequate Adequate Excellent	7 14 5
7. Self-evaluation strategies, activities	Inadequate Adequate Excellent	1 17 8
8. Peer evaluation strategies, activities	Inadequate Adequate Very helpful	7 10 8
9. Staff evaluation strategies, activities	Inadequate Adequate Very helpful	2 5 18
10. Effectiveness of task	Ineffective Effective	3 22
11. Activities completed in task	Few Some Most or all	2 9 15

A second source of student feelings about the microteaching activities was the daily performance logs maintained by the students (see Appendix B). Interns recorded comments about a variety of activities, including microteaching. Some of the comments indicated satisfaction with the activity and statements as to the value and advantages of the activity.

> "I never believed I could see so many bad habits in only seven minutes. Well worth it."
>
> "Kids responded well. The topic was not as novel as I had expected, but they went farther with it than I had expected."
>
> "Seem to get carried away with microteaching. I hate to stop when time is up."
>
> "Good task! Liked the second graders."
>
> "Great! Will make student teaching so much easier."
>
> "Success at last! Liked informal contact with students and sharing of ideas."
>
> "Lesson went well, but did more than just introduce it. Was fun. Glad for experience with real children."
>
> "This was the best task we have had. Really enjoyed teaching this way."

Interns also commented on problems incurred in accomplishing their microteaching tasks.

> "Difficult because I can't anticipate what they know or what they're capable of grasping in seven minutes."
>
> "Golly, what a difference each class makes. Too bad we don't know students so we could gear for them."
>
> "I think we should have done 19 before 18. Understand much better. Number 19 much easier."

A final set of responses indicates the progression of one student through the entire range of microteaching tasks.

> "Scared stiff. I thought my presentation was awkward and disjointed and yet videotape not that bad. Good bluffer?"

> "More confidence. Went more smoothly. Theoretical aspects of subject are dry. Would be nice to have a piano in the studio."
>
> "Used musical examples on tape. More interesting. Much more relaxed than I thought possible."
>
> "Had trouble remaining neutral and not trying to teach or tell them my answers all the time."
>
> "Remained a little more neutral and got more valuing responses."

The microteaching activity seemed quite feasible from the human factors standpoint. Interns were highly motivated and appeared to gain satisfaction from their performances. They perceived these tasks as being highly relevant to their future experiences.

Sensitivity Training

Administrative Feasibility

No questions were raised relative to the pilot study since there were no costs involved.

Educational Feasibility

No questions were raised relative to the pilot study since no educational objectives were involved.

Human Factors Feasibility

The purpose in including sensitivity training in the fall semester was based on a desire to offset the lack of peer contact that might be produced as a result of an increased emphasis on individual learning. A second reason for such training was to provide an opportunity for students to learn how to deal more effectively with themselves and others. The training was conducted on a one hour-per-week basis with each of three groups of nine or ten students meeting with a staff member from the student counseling center on campus. The staff person or leader was skilled in sensitivity and T-group work and the project staff felt that such training under a skilled leader would be beneficial to the students.

From the beginning, it was difficult to obtain data about sensitivity training. This was based on a reticence to ask direct questions about the activity. The staff of the fall program tried to stay completely out of the picture in respect to sensitivity operations. They did not attend sessions and generally did not discuss the session activities. Occasionally, students casually mentioned their experiences. Their reactions were noted whenever possible. In general, however, the instructional staff felt that to inquire about or investigate the program would "break the spell" or compromise the relationship.

After the semester had ended, the leader of the group was interviewed about his work with the interns, his satisfaction (or lack of it) with the program, and his perception of the place of this kind of activity in teacher education programs. His responses in all categories were favorable. Although the counselor expressed some concern that the time, one hour per week, was not long enough, he felt, nevertheless, that there was value in even an abbreviated session of the type attended by the interns. The program, according to the leader, was successful in terms of what he considered evidence of behavior change in a number of the participants. His conclusion was that sensitivity training should be continued in some form in future programs.

Student reaction to the program was gathered indirectly, that is, the students were not asked to express their views on sensitivity training directly. However, through a combination of instruments and situations, tentative data were gathered to tap student reactions.

At the end of the first semester, students were asked to evaluate the fall program in the light of selected variables (see Appendix B). One of these variables was labeled "interaction." In responding freely to this stimulus term, a number of students mentioned sensitivity training directly. Some of their comments citing the benefits and advantages of sensitivity training include:

> "Particularly enjoyed T-group sessions--giving confidence to work with people."
>
> "Sensitivity training very good."
>
> "Sensitivity training helped me to get to know persons involved with class."
>
> "The program's greatest asset has been the opportunity to know the professors and students on such a personal level. The sensitivity has given me an insight into myself and others."
>
> "Enjoyed our 'family' immensely! Think sensitivity groups helped. I gained much confidence through them and some good ideas."
>
> "Little contact on individual study days--much in sensitivity groups."

A number of students likewise commented favorably about the experience in later meetings with the staff. Their comments were similar to those cited.

A few students were less enthusiastic about the program. Three of these individuals dropped out of the program. Some of the more negative comments were:

> "[X] broke out in tears the other day. That's not going to happen to me!"
>
> "I really don't have any real problems and feel I'm not contributing if I don't come up with something. Maybe I can dream up a problem for next meeting."
>
> "I don't want to know [X's] secrets and innermost thoughts and I don't want people to know mine."

A further source of recorded reaction were the interviews conducted with the interns at the end of the school year. Students were asked to respond to a number of questions relative to value and carryover of the program. Results of these questions are summarized in Appendix C. Interestingly enough, sensitivity training comes up as a choice on almost all of the questions.

The sensitivity training activity was not planned or included to help students directly acquire any of the 15 competencies. There was a feeling among the staff, however, that something, perhaps the training sessions, perhaps the Hawthorne effect, had contributed to the interns' perceptions of themselves as belonging to a special group, the "M-STEP group." These students were also quite open and candid in any sort of verbal or written give-and-take with both peers and staff.

Furthermore, the students did not seem to suffer from any sort of isolation brought on by the increased amount of individual work and study. Almost paradoxically, in fact, students rated the individualized approach to instruction very highly in terms of interaction with others, as reported in the discussion of the human factors feasibility of the systems approach.

While it is not possible at this time to draw any empirically valid conclusions about the value of sensitivity training to the individual student, there was a definite feeling by almost all involved that the experience was valuable for most students in the pilot group.

Program Elements--In-district

In terms of degree of control over the environment or milieu in which learning takes place, the fall semester program was the easier to manage. With the exception of problems that occurred when it became necessary to utilize outside resources to support the microteaching operation, the systems program was handled neatly within the confines of the Department of Education.

The second semester required much more of a sustained day-to-day linkage between the university, as represented by the coordinator-supervisor, and the school district, in the person of various levels of administrators, and, most importantly, the supervising or cooperating teachers. The reasons for this additional need for interaction, in addition to the obvious shift in program activities from campus to district, were:

1. The disparity between background knowledge about the program of operational project staff and district cooperating teachers.
2. The planned departure from the conventional pattern of student teaching activity.

Whereas the university staff had been working with the Career Teacher Project from its very inception, the teachers who were to handle the major training and supervising responsibilities during the spring had received only a limited in-service program. Therefore, one of the fundamental challenges of the second semester program was to insure that the total program was understood and, once understood, accepted by the district teaching staff. One of the real needs for understanding and communication had to do with the essential differences between the Career Teacher Project and conventional student teaching programs. Table 20 illustrates the fundamental differences between the two programs.

TABLE 20

A COMPARISON OF CONVENTIONAL AND M-STEP IN-DISTRICT PRESERVICE PROGRAMS BASED ON PROGRAM ELEMENTS

Elements	Conventional	M-STEP
Length of program	1/2 semester	1 semester
Time allocation for study, observation, planning	Not specified	3/4 first month, 1/4 last month
Time allocation for teaching	Varies	1/4 first month, 3/4 last month
Classes taken in addition to student teaching or internship	Usually none	1 to 6 semester hours
Base for evaluation by teachers, college staff, students	Often not specified, based on personal qualities	Stated in terms of specific behavioral competencies
Integration of on-campus and in-district learning	Not specified	Skills acquired on campus; practiced in classroom
Number of students supervised and evaluated by college staff member and time spent in supervision and evaluation	15-18 students full-time	28 students 1/2 time
Main responsibility for evaluation	College staff member	Teachers, interns, college staff
Frequency of evaluation	Periodic	Continuous

3

One of the ways in which the Career Teacher Project differed from other student teacher programs was in its length. Figure I illustrates a comparison between the conventional length student teaching program and the pilot program.

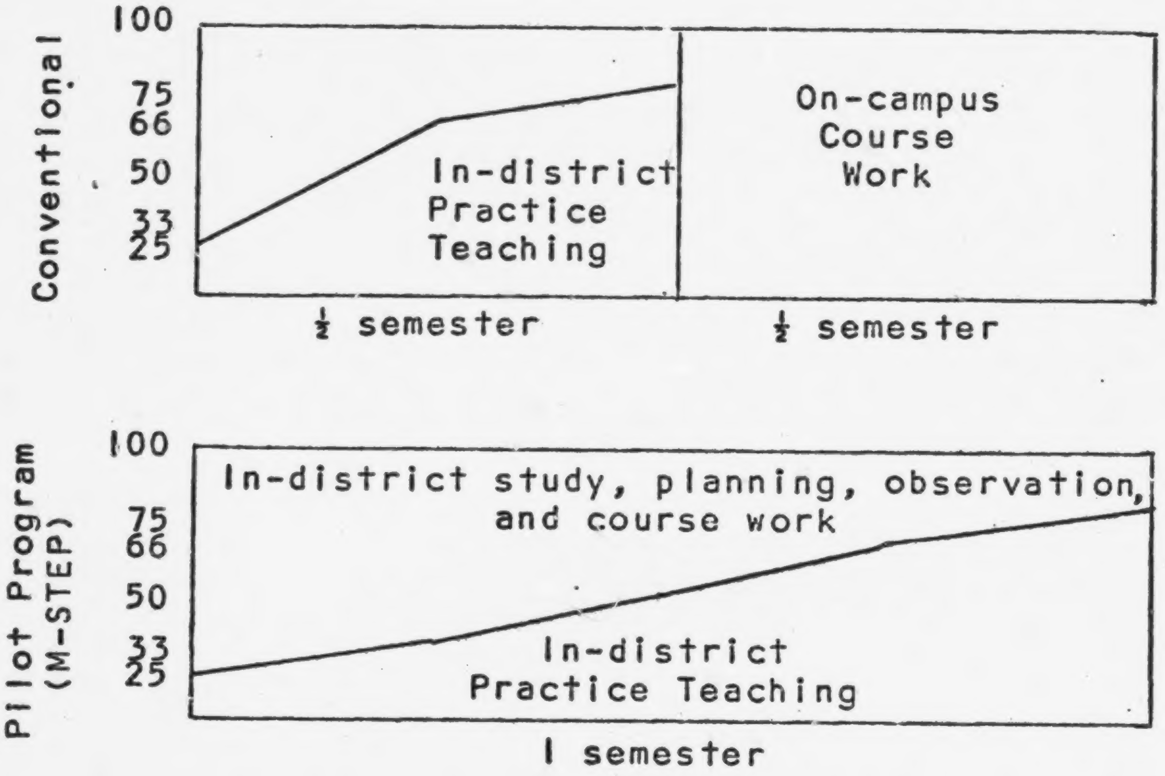

Fig. I.--Comparison of Conventional and Pilot Project Student Teaching Programs.

In order to accomplish the program objective or articulation between and integration of campus and in-district learning experiences, the program planning group decided on a semester-long program in which the interns would have an opportunity to both study and practice teaching skills in the school environment under the supervision of a practicing teacher. Such a program, it was hoped, would provide the intern with a broader and deeper exposure to teaching than would be possible under the conventional one-half semester approach.

As illustrated, the semester was to be divided lengthwise into two areas, study and course work and the actual practice teaching itself. Figure I illustrates proposed study-teaching ratios of 75%-25% moving across the semester to 25%-75%. The semester would culminate with the intern teaching a 75% load. This figure was in keeping with the philosophy that the teacher education graduate is not yet a full-fledged practitioner and should begin teaching with a reduced load with time allotted for study and planning.

Another basic difference between the conventional student teaching program and the Career Teacher Project or M-STEP model was that of additional college class work during the student teaching period. At Washington State University, for example, students do their practice teaching during a one-half semester block and take short courses on campus to fill out the semester. These courses are closely connected to teaching and teaching problems and include guidance, audio-visual methods, and reading.

Students in the Career Teacher Project, several of whom needed additional credit beyond student teaching, were offered an opportunity to take these classes, but with a new approach. In this instance, the college instructors were to come to Bellevue periodically and offer the courses on site. The potential advantage of this approach was that students could complete course tasks within the context of their own teaching needs. Thus, both the teaching and course work were mutually reinforcing. This, in turn, provided more integration of study and practice. This element of university course work will be discussed in more detail in this chapter and has been mentioned because of its relationship to the study-teaching time considerations.

Looking at the Bellevue semester in terms of the program ideals and the realities of the day-to-day teaching and preparation responsibilities of the prospective teacher, the staff felt that some sort of balance should be struck between practice and study. One purpose of the increased length of the second semester program was to provide a gradual induction into teaching, culminating with a large block of responsibility. As mentioned, the study portion was planned to afford students an opportunity to plan for practice and actual teaching, to observe other teachers and programs in action, to complete further learning tasks in a school environment, and to improve individual performance of teaching competencies through self-evaluation and study.

In short, the lengthening and longitudinally dividing of the semester into study and practice components was considered to be one of the most important and necessary dimensions of the second semester program. However, since this element and, in fact, the basic commitment to a semester in the district were innovative in terms of both university and district practices, there were several areas that needed study in terms of feasibility. Second semester program elements were more difficult to approach in terms of the three-part feasibility dimensions and the lines dividing the different feasibility types were often hard to discern. Moreover, the program elements of study time, in-class teaching, and university course work were almost inextricably connected since they made up the major activities and because the interns participated in these activities concurrently rather than in a linear manner.

Study-Observation Time

Administrative Feasibility

1. Was the time utilized properly?

The learning rationale for the decision to divide the semester into study and practice dimensions has been discussed. From an administrative standpoint, it was necessary to make some sort of time allocation for nonteaching time in order to effectively accomplish the program goals involving study, planning, observation, and university course work. Thus, the question of time utilization has relevance not only in terms of opportunities for study and observation, but also in terms of study and meeting time for university classes and the individual intern's teaching load.

In order to provide study and observation time for the interns, a percentage of time for study and teaching was suggested by the project staff. The setting of any sort of recommended time period required steering a course between the Scylla of overregimentation of the individual student program and the Charybdis of leaving the time division solely to supervising teachers, some of whom might view the semester program as simply an extended student teaching program.

The time breakdown proposed was one which, it was hoped, would allow the student some individualization of his program, yet clearly differentiate between the Career Teacher Project activities and those of the conventional approach.

At the end of the semester, both students and cooperating teachers were asked to estimate the balance between study and teaching activities. Since teaching time seemed like a more easily measurable item than study time, data requests were oriented to time spent in teaching practice. Teachers were asked to provide data through a questionnaire administered by the district office of research. Interns were provided with a graph and asked to indicate appropriate times (see Appendix B). Table 21 presents a comparison of these estimates and the project staff time recommendation.

TABLE 21

COMPARISON OF PERCENTAGE OF TIME SPENT IN STUDY AND PRACTICE OF TEACHING, SPRING 1968

Month	Suggested		Teacher's Estimate		Students' Estimate	
	Study	Practice	Study	Practice	Study	Practice
February	75	25	66	37	62	38
March	66	33	52	47	44	56
April	33	66	28	70	20	80
May	25	75	34	64	13	87

Data show close correspondence between teacher and student estimates at the beginning of the semester but times begin to diverge as the semester moves on. It might be noted that at the first several weekly meetings, interns complained about their teachers' lack of knowledge of or sympathy with a program providing for specific amounts of study time. Interns were asked to explain this provision to the teachers and a printed description of the program was prepared and disseminated. In addition, the coordinator-supervisor visited a number of teachers and explained the program anew. This action took place during the first two weeks of the term and may help to explain the correspondence at the beginning, even though the ratios were at variance with the proposed schedule.

Students were also asked to rate on a scale the major elements of the second semester program (see Appendix B). An opportunity was also provided for the intern to state the reasons for these ratings. Table 22 presents a summary of student comments along with the numbers of students responding.

TABLE 22

INTERN RATING OF STUDY TIME PROGRAM ELEMENT

Ratings and Reasons	Frequency of Response
Ratings:	
Poor	5
Fair	6
Satisfactory	5
Good	1
Excellent	5
Summary of reasons for ratings:	
No time allowed	5
Little time allowed	5
Time was excellent, ample	4
Difficult to leave classroom to study	2
Time decreased too rapidly	1
Study time idea too idealistic	1

As the data in Table 22 indicate, students generally felt that the time factor was insufficient for their needs. This sentiment was also expressed quite vocally throughout the semester at the weekly critique sessions.

A method used in analyzing the data in this study has been to compare what was supposed to happen with what actually did happen and consider the reasons for any disparity between objective and result in order to predict what might be expected in a future application of similar operations. In this type of analysis, it is also necessary to decide which view--the ideal, planned for, or the actual, usually a compromise--is the more appropriate or acceptable in an operational situation.

The problem of determining the administrative feasibility of setting aside a block of time or establishing a study-teaching time ratio has been such an exercise in comparison. The study-teaching plan described was suggested as a way of accomplishing the goals of the second semester program and was, therefore, concerned with more than student teaching alone. The project staff were careful to use the term *suggested plan* in order to avoid the idea of a required arrangement. This precaution was observed so as not to stifle whatever flexibility of program might be arranged between supervising teacher and intern. The details regarding the study-time plan were disseminated through the interns and directly through visits and written correspondence. The results of the attempt to manage time resources have been presented. Although averages tend to obscure individual cases, they are useful for certain types of comparison. The averages, in this case, of study-teaching time estimates indicate a divergence from the recommended ratio from the beginning and for each month thereafter.

In the light of the total study time needs of the interns who were taking other course work in addition to the teaching internship, it would appear that not enough time was allowed for study. As enlightening as these average times might appear, the student evaluations of the study time element, especially student comments, seem to provide more insight into individual problems. Ten, or almost half, of the students responding to the rating sheet rated study time arrangements in the poor-fair category. The predominate reason for the low rating was that study time was not made available at all or in an insufficient amount and that in most cases they were required to remain in the classroom for the entire school day.

The generalization that would seem most valid is that the study-practice ratios actually followed were not feasible or workable in terms of getting the total job, that of teaching *and* study, accomplished. This conclusion is, however, not a judgment of the original program element as proposed since planned suggested times were not followed and, in fact, in over 40% of the cases, little or no study time was allowed at all.

The crux of the administrative feasibility problem was the disparity between suggested and actual time allocations. This problem will be discussed also in considering the human factors dimension but needs to be considered here since time was and is a resource to be allocated and budgeted for in managing a program.

The most likely reason for this gap between planned and actual time use lies with the "suggested" or "recommended" nature of the proposed spring semester plan. Whereas, the fall semester systems program was *the* program, subject only to modification in terms of external constraints, i.e., the microteaching program, the spring program proposal was suggested to the cooperating teachers as a general guideline for their operations with the final program being worked out between the teacher and intern. Although a written description of the proposed program was provided to both teachers and interns, no attempt was made to require compliance with the recommended activities, especially in terms of time allocations. As a result, teachers generally went their own ways, after falling into a more conventional approach to student teaching. In short, the university adopted a "soft" line as far as requiring adherence to the second semester proposed time plan.

The teachers, however, interpreted this more open or flexible approach as indefiniteness as to what was expected of them. In responding to a district questionnaire concerned with a teacher evaluation of the program (see Appendix B), teachers made such statements as:

> "Specific outline of duties needed."
>
> "Teachers should have specific requirements."
>
> "Needed list of requirements."
>
> "I don't think the Bellevue teachers really understood their program."
>
> "Everything was so vague."
>
> "Give the students more time to teach."

"The more teaching time, the better the teaching techniques."

"More definite ideas need to be communicated as to what is expected in the program."

Another factor that intensified the problem and caused pressure to be exerted on the interns was the viewpoint of university staff responsible for teaching the in-district classes. This group was not involved in the original program planning nor were they involved in first semester activities. At least one of these instructors took the point of view that the study-teaching time breakdown was the prescribed program for second semester and that class time and study time were to be made available as part of the study portion of the program. However, the visiting staff were not consistent in this position in that they did not adequately take into consideration the decreasing nature of the time percentage allocated for study. As a result, classes were spread across the entire semester resulting in a serious time problem during the last month. The interns and coordinator-supervisor were caught in the middle of these conflicting points of view.

Many of the teachers, because of the lack, as they saw it, of a prescribed program, tended to utilize the familiar practice of conventional student teaching programs. They made little attempt to observe a specific balance between time for teaching and for study. Visiting staff, as mentioned, wanted the students free for class activity when they came to Bellevue and were not always tolerant of any conflicts.

The interns felt a need to maintain good relations with both groups and were, therefore, under pressure to achieve their own time balance. The coordinator-supervisor, likewise, had to try to live with both groups and with the students who felt that the problem was one of communication that could be resolved simply through more and better communication. Attempts by the coordinator to try to encourage time balances among 28 pair of interns and cooperating teachers and to try to impress upon the university staff the realities of the time problems in Bellevue were largely of a dike-plugging nature and consisted of a number of point-of-problem contacts. These attempts were largely ineffectual since it was difficult to sell the merits of a proposed, but not required, program about which a number of teachers felt they had been inadequately informed as opposed to or as a compromise with the more familiar procedures of the regular student teaching program.

These coordination efforts were further diminished by the reduced opportunity for coordinator-supervising teacher contact necessitated by the nearly double supervisory load and by additional data gathering and recording responsibilities of the coordinator.

In essence, the basic problem of lack of correspondence between the original time allocation proposal and actual practice, including the conflicting viewpoints and reasons for these positions, runs like a theme through the remainder of the presentation and discussion of second semester data.

Educational Feasibility

1. Did the arrangement provide an effective vehicle for the attainment of program objectives?

As described in the preceding section, the recommended study-observation time element was changed by interns and cooperating teachers and different time ratios observed. These time ratios, which placed a heavier emphasis on the practice teaching element, did not, according to the interns, allow sufficient time for study, planning, making observations, or completing university class work. This curtailment of the study time available, combined with university class scheduling problems, put a great deal of pressure on the students who were often caught between teaching and study requirements and responsibilities. For these reasons, the study-time allocation proved unfeasible in enough cases (44% of those responding to the rating sheet) to warrant rejecting the feasibility of this program element.

Human Factors Feasibility

1. Did the teachers supervising the interns accept this new block of study-time procedure and perceive it as different from the regular student teaching period?
2. Did the teachers make an effort to participate and cooperate with the interns in this approach?

The particular questions which guided the investigation of this section have been answered in part in the discussion of administrative feasibility. As stated, the teachers generally departed from the proposed second semester time proposal and placed a heavier weight on practice teaching, proportionately, than did the proposed program. This emphasis was more in keeping with the more conventional approach to student teaching and may be attributed to the "suggested" rather than "required" nature of the time allocation outline for the program. Added to this was the feeling, among teachers, of a lack of specific requirements and responsibilities. This latter situation resulted in the teachers observing and practicing more familiar practices.

In a real sense, the general absence of a required structure for the second semester and its corollary, a lack of supporting directives and checks to implement the planned program, became an independent variable that had not been accounted for in planning. Although a printed copy of the proposed program was distributed to and discussed with each of the teachers, the majority of the teachers never seemed to feel a need for a systematic and balanced weighting between study and teaching time.

In planning for future applications of this type of program, an attempt should be made to clearly spell out the nature of the program structure to be followed and every effort should be made to communicate the need for adherence to the planned program. This would involve more preplanning with and a different focus on the in-service training of the cooperating teachers. As the pilot study turned out, teachers did not perceive and make provision for the fundamental differences between the Career Teacher Project and the conventional methods of supervising student teachers.

University Course Work

Administrative Feasibility

1. Was this approach feasible in terms of support costs, especially staffing expenses and travel?
2. Were there any problems in regard to grading and granting of residence credit for off-campus work?

The two main factors that exerted the most influence on the administrative feasibility of the university courses program element were those of funding and scheduling. These factors were connected and grew out of the general budgeting limitations placed on the project. The first problem was related to the costs of supporting the program in terms of travel expenses. Since the geographical distance between Washington State University and Bellevue was considerable, it was necessary to drive or fly to Bellevue to conduct classes. In order to minimize expenses, an attempt was made to schedule at least two instructors during the same period and then provide them with automobile transportation through the university motor pool, a cheaper form of transportation.

However, a number of students were taking more than one course, the most common combination being guidance and reading. Therefore, in order for students to attend both classes, it was necessary to schedule them a day apart. This meant that two instructors traveling by car would spend two days in Bellevue exclusive of travel time. Each instructor would meet classes one of the two days with his fellow staff member conducting classes the other day. Likewise, any student taking both courses would have to be gone from the classroom for two days in a row. In addition, since the instructors were spacing their trips to Bellevue, each would meet with the class for several hours during the one day he was in the district.

Another aspect of the cost-scheduling problem was that travel arrangements were made with the prime interest of saving money. Often, in order to accomplish this administrative expediency, last minute arrangements would be made and the coordinator in Bellevue notified often a day or two before the instructors were to arrive. This lack of notification presented problems in acquiring meeting space, especially during the day when facilities were usually used to capacity. The amount of time needed to acquire space, revise schedules, and notify interns and teachers was excessive and added to the total problem of coordinating the efforts of two organizations 260 miles apart.

A further budgetary problem was that of compensation for the visiting staff. Salary costs as such were not a directly costable item since the instructors did not receive extra remuneration for off-campus teaching responsibilities. However, the cost was borne indirectly, either by the university in terms of lost class time and productivity when the staff were gone from campus, or by the instructor himself who would assume the extra assignment in addition to his already contracted duties. Future programs should contain specific budgetary items for staff salaries for this type of off-campus work.

In the light of the problems caused by cost and scheduling considerations, this program element should not be considered as administratively feasible.

Educational Feasibility

1. Did the students acquire desired competencies through these courses?
2. Was there a relationship between course work and classroom activities?

The problems which affected administrative feasibility adversely, especially the problem of scheduling difficulties, likewise degraded the educational feasibility of the university course work element.

This was brought out by interns in an evaluation of the university course program element. Interns rated this item from one to five (poor to excellent) as part of an overall evaluation of second semester activities (see Appendix B). Table 23 presents a summary of interns' ratings and responses.

TABLE 23

INTERN RATING OF UNIVERSITY COURSES PROGRAM ELEMENT

Ratings and Reasons	Frequency of Response
Ratings:	
Poor	6
Fair	5
Satisfactory	4
Good	6
Excellent	0
Summary of reasons for ratings:	
Lacked clarity, organization, continuity	7
Guidance good course	3
Not enough time for course work and assignments	3
Waste of time, money	2
Useless (secondary reading)	2
Generally good program	2
499 (individual study) useless	2
Good, got to work with local specialists	1
Not relevant to actual situation	1
Too much on top of teaching	1
Couldn't integrate well with regular teaching	1
Elementary reading valuable	1
Worthwhile compared to regular classes	1
A-V too individual, independent-study based	1

The prevalence of negative or less than satisfactory ratings seemed more a function of the administrative problems than as a consequence of the quality of the course work itself. In fact, in personal comments made by students, it appeared that the interns were almost uniform in their praise of the guidance course. This course was the most successful as a means of integrating campus theory with district practice and as such was able to retain a continuity not possible in the other classes.

The elementary reading course was kept as continuous and integrated as possible through visits with reading specialists and through each intern's working with at least one student with a reading problem. Students commented favorably on this course, also.

The audio-visual course was well received although some interns felt that they were on their own too much and that self-instructional systems in the area of media utilization were less helpful than a live instructor would have been.

Staff evaluation of the educational feasibility was mixed but generally favorable. All stated that their learning objectives had been reached with the exception of the reading professor who was dissatisfied with the secondary level reading course.

The staff felt that the situational context in which they and the interns carried on class work was a positive feature of the program. Each of the instructors was able to work with a district counterpart or contact who helped to marshal district resources in support of the course work. As a result, there was a continuity of activity during the period of time between class sessions.

The basic idea of combining theory and practice by conducting on-site classes in a job-oriented context proved a sound one. However, the advantages of such a program were minimized by travel and scheduling problems, which in turn, were caused by the geographic separation of the two organizations. In the light of these factors, the most appropriate feasibility decision would be that of feasible, with qualification.

Human Factors Feasibility

1. Did the problem of attending classes during the school day cause any difficulty for students in terms of their relationships with class instructors, supervising teachers, or both?
2. Did the demands of the course work added to the teaching responsibilities create an excessive work load on the student?
3. What were the attitudes of the supervising teachers toward the dual responsibilities of the interns?

The preceding section, particularly Table 23, describes the evaluation of the educational impact of the program upon the interns. Student attitudes toward this program element were discussed in this section also.

What of the teachers? How did they feel about this extra load on the student interns with the additional requirement that interns leave the classroom to attend classes? In general, there was no real problem in this area. Although, as mentioned, teachers and interns planned programs that emphasized in-class teaching time and minimized the allocation of time for study and preparation, there were no difficulties encountered in getting interns released for classes during the day. In retrospect, the method used for setting up class times and scheduling intern time did not provide sufficient flexibility to permit an intern to be relieved of classroom duties to attend university classes for periods of from two hours up to an entire day or longer. Teachers and interns were simply notified by written memoranda as to dates and times of class meetings. Students were to attend these classes and since the instructors were coming to Bellevue, the schedule was made to accommodate them.

This procedure provided direction and specificity cited by teachers as lacking in other aspects of the program. As a result, teachers honored these schedules, even those which were given on short notice. Although there were occasional complaints, there were no widespread reactions to the class meetings.

Likewise, there were no reports of teachers penalizing or reacting negatively toward individual interns because of disruptions in classroom routine caused by these classes. Rather, teachers seemed to sympathize with the interns and directed what few complaints there were to the coordinator.

The degree to which the dual roles of intern and teacher resulted in excessive work loads for the interns varied from individual to individual. Some interns carried no additional class work; some carried six hours. An intern with a six-hour load might, in fact, use his time more effectively than one carrying fewer hours. The real indicator as to extra burdens was described in the section on study time in which 30%-40% of the interns expressed dissatisfaction with the amount of time they had for study and planning.

Seminars and Group Meetings

Administrative Feasibility

No questions were raised.

Educational Feasibility

No questions were raised.

Human Factors Feasibility

1. Did the students find the weekly meetings necessary and desirable in terms of social needs?

The Wednesday evening meetings represented an activity that is usually found in most student teaching programs. The main purpose of the meetings in terms of the Career Teacher Project was to provide an opportunity for a "gathering of the clan" to compare notes, discuss problems, and visit socially. Since the group had been very close during work on the fall semester program, but now were located in eleven different buildings, it was hoped that a weekly meeting would help to maintain the group spirit and identity. A second objective of the meetings was to provide an orientation to the district and general setting in which they, the interns, would be teaching.

Considered from the human factors standpoint, the weekly meetings were of limited value, perhaps even less successful than in a conventional student teaching program. The reasons for the weakness of the weekly seminar program element are connected with other problems attendant with the Career Teacher Project. These are:

1. Student loads were such that weekly meetings, especially a two-hour meeting, was regarded as an imposition.

2. Twenty-eight was too large a number of interns for a profitable seminar discussion. Interests were too varied; not all interested in problems at other grade levels.

3. It proved difficult to sustain a program of different speakers and activities for an entire semester.

4. Student morale was often low on Wednesday nights and meetings frequently took on a negative tone. This was further intensified by a general frustration at not having resident staff near enough to provide definitive answers to problems. Often a problem would be raised and a week would pass before a definite answer could be gotten from university staff.

5. The fact that interns were not required to take part in the planning or coordinating of the seminar (a decision made in deference to their teaching and course study loads) may have diminished individual involvement in the weekly meetings.

These generalizations were based on weekly activities and discussions with the interns. In addition, the interns themselves were asked to rate "weekly seminars" as one of several second semester program elements (see Appendix B). Table 24 illustrates the ratings of 22 interns. Also included are reasons for the ratings.

A tentative conclusion to be drawn from the data presented in Table 24 is that the seminars had social value to the interns but this benefit was dulled and in some cases negated by the frequency and duration of the meetings.

Planners of future programs of this type should consider the reasons for weekly seminars and time needed for such meetings within the total context of the program.

TABLE 24

INTERN RATING OF GROUP MEETINGS PROGRAM ELEMENT

Ratings and Reasons	Frequency of Response
Ratings:	
Poor	2
Fair	5
Satisfactory	7
Good	6
Excellent	2
Summary of reasons for ratings:	
Some time wasted	6
Good, interesting, helpful, informative	8
Would have been better to meet every two weeks	3
Big "gripe" session	2
Good for getting problems straightened out	2
Social benefits; keeps communications lines open	3
Too many individual problems discussed in group	3
Need more discussion of classroom practices	1

Classroom Teaching

Administrative Feasibility

The major activity in the Bellevue semester was classroom teaching. Each intern worked out a study-teaching program with his supervising teacher which was to have been based on the needs and capabilities of the intern. A balance between study and practice was discussed by teachers and interns who worked out their own arrangements. In most cases, the teaching was considered to be the most important aspect of the spring program. Therefore, more of the intern's time was spent in this activity than in any other.

From an administrative standpoint, there were no serious cost or logistical problems, even with the longer time period. Teachers were willing to work with the interns for an extended time period.

One problem, already mentioned, that of time management, was involved in planning for intern teaching duties. In a number of cases, study time opportunities were sacrificed for faster assumption of teaching duties. This minimized the study time available to interns.

Educational Feasibility

1. Were the students able to demonstrate their teaching competencies in the classroom setting?

The classroom teaching element appeared to be a logical and feasible way for the interns to develop their classroom teaching competencies. All of the interns began the second semester with limited and varying amounts of classroom work and increased in total class responsibility over the course of the semester. Likewise, all interns successfully completed the classroom or student teaching phase of the program, although at varying levels of competency as assessed by the coordinator-supervisor, the cooperating teacher, and the intern.

The interns found the classroom experience to be a satisfying one as evidenced by their responses to the evaluation instrument covering second semester activities. Table 25 illustrates student responses to the program element "classroom teaching."

TABLE 25

INTERN RATING OF CLASSROOM TEACHING PROGRAM ELEMENT

Ratings and Reasons	Frequency of Response
Ratings:	
Poor	1
Fair	1
Satisfactory	4
Good	7
Excellent	9
Summary of reasons for ratings:	
Good, great, beneficial	5
Master teacher delegated meaningful duties, experiences	5
Built up to teaching gradually--good balance	2
Question some of the things am told to teach	1
Got varied practice	1
One semester too long to be with one teacher	1
Too little feedback from teacher	1
Master teachers need to be screened more thoroughly	1
Needed more disciplinary responsibilities	1
Got to teach what supervising teacher disliked	1
Excellent experience with a great supervising teacher	1

In addition to the rating sheet procedure, students were also asked to comment via interviews on the value of the various program elements (see Appendix B). The interns chose student teaching as the element that they believed would have the most carryover to the following year.

In summary, the classroom teaching element was the most successful in terms of most of the personnel, interns and teachers, involved. This was the most familiar activity for most of the supervising teachers and they carried out their responsibilities in a thoughtful and effective manner.

Human Factors Feasibility

1. How did the students perceive this arrangement in terms of their own plans and needs?
2. Was an entire semester off campus feasible in terms of the interns involved?

The one factor that seems worthy of mention in this section is that of the length of the classroom student teaching experience. This length variable, one semester, affected or intensified certain aspects of the program that might have gone unnoticed in the shorter one-half semester program.

First, interns felt they had gotten a more realistic look at the day-in-day-out work of teaching once the novelty and surface appeal had worn off. About the middle of May, the interns were tired, having begun work the first week in February. The most dramatic example of the reality of teaching sinking in was that of one intern who decided not to begin teaching in the fall because she saw how confining teaching was. She plainly felt that she was not yet ready to settle down to a routine.

Second, the interns worked closely with their supervising teachers for a doubly long period. A few examples of personality incompatibility between intern and teacher began to show up after the mid-point. Conversely, several students who started out by antagonizing their teachers were able to work out difficulties because of the extra time afforded by the increased length of the program. In addition, interns generally felt that they and their teachers had gotten to know each other better over the semester.

This meant also that any faults were more readily apparent and the interns felt they were judged more thoroughly and, perhaps, severely as a result of the program length.

A final aspect of the length factor was that many of the interns felt that the educational value of the classroom teaching part of the program was directly proportionate to its length. They could spend more time developing their own styles, especially in the area of classroom control and management. Interns got to know their students better and thought they felt more like teachers at the end of the semester than they would have at the end of eight weeks.

Supervision and Evaluation

Administrative Feasibility

1. What were the costs of this program of coordination, supervision, and evaluation in terms of the practices of the pilot study?

Although the activities and responsibilities of supervisory personnel were different due to the length and emphasis of the Bellevue semester, costs were similar to what might be expected in a conventional student teaching situation. The coordinator-supervisor, although he had a different job from that of the typical supervisor, received a salary comparable to that paid an assistant professor handling supervisory duties. Supervising teachers, because of budgetary limitations, received $36.00 apiece for supervising an intern for an entire semester. Normally, the $36.00 figure, an honorarium, represents the amount paid for the one-half semester block.

Since cost was not an important factor, the real question of administrative feasibility concerned the actual responsibilities of the coordinator-supervisor and his proposed work load. Although this would not necessarily present a problem in a future application, this problem affected the administrative efficiency of program efforts.

As described in the preceding chapter, the coordinator-supervisor had the joint tasks of coordinating the in-district activities of the Career Teacher Project as well as the job of supervising the 28 interns. In addition, the coordinator-supervisor had the tasks of observing the program, generating questions and problems to be answered, and collecting data relative to the feasibility of the total program. The time breakdown agreed to at the beginning of the semester was one-half time for combined coordination and supervision duties, with one-half time to be devoted to feasibility study research.

The demands of the program made such a schedule impossible. As it turned out, the first activities of coordinating and supervising were more than a full-time program. The innovative and experimental nature of the program led to various unplanned events, such as lengthy meetings with administrative staff and teachers. The geographic distance meant that more effort was needed to keep the communications channels open and functioning. The university course work required additional coordination. In addition, a special videotaping project was initiated and carried out during the last two weeks of school. Last, the job of supervision was a difficult one to interpret to the teachers and interns since many of them expected a pattern similar to that of the conventional program including weekly observations, etc.

Although certain aspects of the second semester program tended to receive short shrift, notably the weekly seminars, the fact that the total effort was completed satisfactorily tends to support the overall administrative feasibility of the supervisory program element. Under a more regular assignment of a coordinator-supervisor (full-time), a project of this type could be handled even more effectively and smoothly.

Educational Feasibility

1. Were the supervising teachers competent to evaluate the interns in terms of growth in the specific behavioral competencies that were the bases for the program and the standards of effective teaching?
2. Was the in-service program adequate to train the teachers to work within the context of performance objectives and measures?

One of the most critical aspects of the second semester program was the insurance of continuity between campus-acquired competencies and their subsequent demonstration in the classroom setting. A major key to the integration of theory and practice were the efforts, individual and collective, of the classroom cooperating teacher. The contributions of the teachers were two-fold: (1) the guiding and encouraging of the intern in his or her development; and (2) the evaluation of intern growth as a competent teacher.

The evaluation duties of the teachers were different in the Career Teacher Project since the teachers not only worked with and evaluated the interns over a longer period of time, but also they evaluated according to different criteria than in the usual situation.

For the purposes of the Career Teacher Project, a new evaluation form was developed which provided a means of observing and assessing intern performance on several of the skills developed through systems work of the first semester. In fact, the description of the behavior to be observed is in the same wording as the terminal objectives of the particular task. The new rating forms differ from the conventional Washington State University instruments which are more oriented toward personality characteristics (see Appendix B).

Supervising teachers were asked to rate interns using both forms. All teachers received written instructions on the use of the rating forms and the coordinator-supervisor discussed these with each teacher. In addition, interns were to work with the teachers on the evaluation of teaching behavior and were to evaluate at least one lesson on a cooperative basis with the teacher. The results of the evaluation indicated that not only had the students successfully demonstrated teaching competencies in the classroom situation, but that the teachers had effectively rated the students using performance criteria.

Although there were variables which would limit statistical comparison of evaluation data, a general inspection indicated close correspondence between teacher ratings on conventional and special project forms and, in turn, between teacher and coordinator ratings on the behavioral form. The following comparisons seem significant.

1. The 28 interns were observed and rated on two separate forms, the regular WSU Student Teacher Rating Form and an instrument designed to assess the student's competence levels on the specific behaviors acquired first semester (see Appendix B). Interns were rated from 3.0 or Average up to 1.0 or Outstanding on the five-point scale. The average rating was 1.37 on the final ratings. The average of all ratings on the WSU scale was 1.96.

2. Ratings on the behavioral competency-centered form ranged for all interns from a 1.0 or Low rating up to 6.0 or High. The average rating of all supervising teacher observations was 4.84.

3. Ratings on the behavioral scale as completed by the coordinator-supervisor ranged from 2.5 or Below Average up to 6.0 or High. The average rating based on all supervisor observations was 4.85. This average rating was almost identical to that of the cooperating teachers' rating of 4.84.

4. Further analysis of the performance ratings by the teachers revealed that the teachers made notes and suggestions indicating that they, the teachers, could competently work in the area of behavior assessment.

The interns were asked to rate the element of teacher evaluation of their efforts on the second semester program rating instrument (see Appendix B). Table 26 summarizes the intern responses on this item.

Intern responses indicate a favorable reaction toward the evaluative efforts of the supervising teachers. The quality of the evaluative comments and suggestions made by the teachers combined with the close relationship between and among ratings by teachings on the different forms and by the supervisor and teachers on the performance form lead to the conclusion that the teachers did a competent job of evaluating.

TABLE 26

INTERN RATING OF EVALUATION: SUPERVISING TEACHER PROGRAM ELEMENT

Ratings and Reasons	Frequency of Response
Ratings:	
Poor	0
Fair	3
Satisfactory	6
Good	3
Excellent	10
Summary of reasons for ratings:	
Good, excellent	8
Needed more feedback	5
Wanted more observation sessions	3
Few compliments	1
Lots of freedom, feedback	1
Can't say enough about teacher	1

This generalization is significant also to the extent that the teachers had received little or no formal training in performance evaluation save that provided by the coordinator-supervisor and the interns on an individual basis. Teachers had attended a series of monthly in-service meetings but after the second meeting, the project staff decided to de-emphasize the specifics of stating and measuring behavioral objectives. The decision was made on the basis that the teaching behaviors embodied in the competency descriptions were really just a more systematic approach to the analysis and observation of competent teaching. The teacher, it was reasoned, probably had an idea of competency behaviors and needed only a brief introduction to the most efficient and precise means of observing and assessing teaching behavior. The generally high quality of teacher evaluations eventually bore out these assumptions.

Human Factors Feasibility

1. What were the teachers' reactions and feelings toward student comments about and attempts to demonstrate specific task objectives in their teaching?

In general, although the performance standards approach was new to the teachers, they nevertheless cooperated with staff and interns in the development and refinement of these skills. Part of this general cooperation was probably due to some sort of Hawthorne effect and to the fact that the 28 teachers were volunteers. In addition, the project staff did not attempt to force the competence approach or the total program on the teachers and perhaps were less aggressive than they should have been in this respect. As a result, the teachers were able to assimilate the competencies approach in with their established ways of viewing teacher competency, the latter a more personality or characteristics-based orientation.

Since the performance standards approach represented an additional way of evaluating good teaching rather than a conflicting way, the teachers in general seemed to accept the evaluation procedure and the new behaviorally oriented appraisal form. In the few instances where teachers rejected the approach to the extent of not evaluating students behaviorally, these rejections were in reaction to noncontent aspects of the program such as dislike of administrative procedures and dissatisfaction with remuneration for their services.

Discussions about evaluation with both interns and the supervising teachers indicated that the teachers in general not only accepted performance-centered approaches, but actively cooperated with the interns in helping them to develop and refine their teaching competencies.

Summary

The purpose of this chapter has been to present findings concerning the feasibility of the program elements of the Career Teacher Project in the pilot form. Following is a summary of feasibility decisions about each element as evaluated in terms of administrative, educational, and human factors feasibility. Table 27 illustrates these judgments in relation to the pilot program.

Although several elements were judged to be unfeasible or feasible with qualification according to one or more of the three feasibility dimensions, such decisions were based on problems exterior to the element itself, i.e., budgetary problems, deviation from proposed time schedules, etc. All elements appear to be inherently feasible, given certain considerations, such as availability of funds, adequate personnel to support program elements, or improved university-district linkage or communication.

TABLE 27

SUMMARY OF FEASIBILITY CONSIDERATIONS
CAREER TEACHER PROJECT, PILOT

Program Element	Type of Feasibility Decision								
	Administrative			Educational			Human Factors		
	Yes	Qualified	No	Yes	Qualified	No	Yes	Qualified	No
University-district cooperation	X	.	.	X	.	.	X	.	.
Performance-centered standards	X	.	.	X	.	.	X	.	.
Systems	X	.	.	X	.	.	X	.	.
Microteaching	X	.	.	X	.	.	X	.	.
Sensitivity training	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	X	.	.
Study-observation time allocation	.	.	X	.	.	X	X	.	.
University classes	.	.	X	.	X	.	.	X	.
Group meeting seminars	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.	X	.
Classroom teaching	X	.	.	X	.	.	X	.	.
Supervision evaluation	X	.	.	.	X	.	.	X	.

[a] Not applicable.

CHAPTER V

PROJECTED APPLICATIONS

Introduction

A major purpose of the pilot study has been to examine the feasibility of the various program elements of the Career Teacher Project. Conclusions drawn from the data generally support the belief that the program, in whole or in part, provides a feasible approach to teacher education.

The task remaining in assessing the feasibility of the project is to consider these same elements and relationships in an operational context. Essentially, this involves moving the investigation from the pilot study sample to a larger situation more closely approaching the characteristics of the population, in this case a population of teacher education students, programs, and institutions.

To accomplish this aim, a model has been developed to provide an approximation of a teacher education program. Data and conclusions from the pilot study have been extrapolated to this model and further estimates of feasibility made. The rationale for the decision to develop a model rather than extrapolate directly to a particular program, that of Washington State University, for instance, was that a generalized approach might be more satisfactory to administrators making decisions to adopt or not adopt program elements for use in their own programs.

Extrapolation Model

Following are the basic characteristics of the teacher education program model to be used in projecting feasibility data from pilot to operational applications. Included are:

1. *Institution*--four-year college or university, public or private, with some responsibility for preparing teachers.
2. *Population*--600 seniors, elementary and/or secondary level.
3. *Curriculum*--modifiable, as needed, to accommodate performance standards emphasis.
4. *Facilities*--comparable to those found in pilot institutions.
5. *Financial resources*--comparable to pilot institutions.
6. *Staff*--comparable to pilot institutions.
7. *Student teacher placement and supervision*--one quarter or one semester time block for student teaching, use of resident centers away from campus in urban, suburban, and rural districts. Placement in public schools in cooperating districts and use of cooperating teachers and resident supervisors.

Program elements from the Career Teacher Project concerned with initial acquisition and practice of teaching competencies might be incorporated into the institution's program in one or a combination of three plans to be referred to as Plans A, B, and C. These are described as follows:

1. *Plan A.*--Competencies are acquired through the individual task systems approach as in the pilot project with work accomplished on campus.
2. *Plan B.*--Tasks are assimilated into existing courses, i.e., measurement and evaluation of learning course.
3. *Plan C.*--Competencies are acquired through task systems accomplished during the in-district part of the program.

Figure 2 illustrates the extrapolation procedure followed in examining and projecting the feasibility of program elements in a model operational setting.

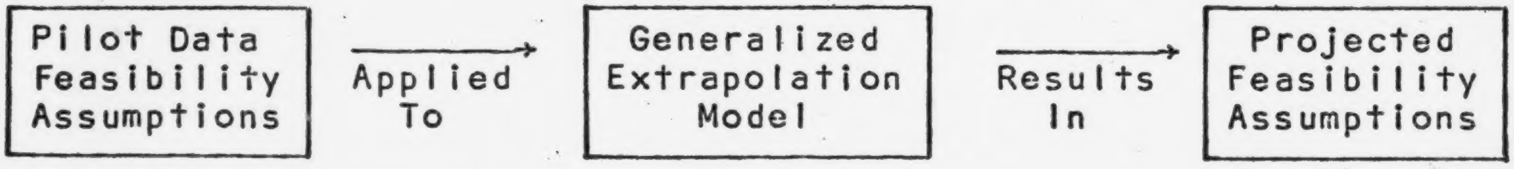
Pilot Data Feasibility Assumptions
Applied To
Generalized Extrapolation Model
Results In
Projected Feasibility Assumptions

Fig. 2.--Extrapolation Procedure.

The next step, beyond the scope of this study, might be for administrators to assess specific institutional feasibility of program elements by examining both pilot and projected feasibility assumptions in the light of objectives and resources of one particular institution. The final step would be to reject or adopt any or all of the program elements.

Program Elements

University-District Cooperation

A recognized limitation of a description of university or college-district cooperative relationships is the fact that programs planned under the new certification guidelines will require a three-way partnership involving not only the college and school district, but also representatives of a professional organization in education.[1] At this time, however, no specific professional organization has been designated as *the* third member of the partnership. It seems likely, though, that future pilot studies to test the feasibility of the new certification program will contain some provisions for testing the appropriateness of one or more of the professional organizations, i.e., Washington Education Association, Washington State Council of Teachers of English, as the representative organization. In the absence of such data, the following extrapolated consideration, although taking into account the new guidelines, will be generally limited to the college-district cooperation model.

Administrative Feasibility

The meetings held prior to the beginning of the Career Teacher Project pilot study were necessary for research and development purposes, especially in the working out of the behavioral objectives of the program. Future applications of the Career Teacher Project components would not require that this work be reaccomplished since a basic list of competencies have been developed and refined, although a number of meetings and workshops would still be needed in order to initiate and facilitate joint program planning.

One factor that would facilitate expansion of the program within an institution would be the existence of current working relationships with several school districts for the conventional purpose of providing opportunities for practice teaching experiences. It would seem desirable to capitalize on these existent cooperative university-district relationships and to develop more as needed. However, these joint efforts should go beyond the present level of cadet placement and supervision within a given district. Closer working arrangements would need to be established. Such cooperative efforts could be accomplished through the following types of meetings:

1. A general meeting might be held to discuss the concept of college or university-district cooperation and what would be needed to develop an integrated preparation program which would be in line with the new certification guidelines. Such a meeting might involve all resident center supervisors; representatives, including classroom teachers, from school districts; and a number of college or university faculty actively engaged in teacher education. This meeting could be held for one or two days on the campus with the parent organization of each representative bearing travel costs and per diem expenses.
2. Meetings would be conducted between the college supervisor and a staff member from the cooperating school district with specific duties in teacher education and certification. An important consideration at these meetings would be the identification and selection of a cadre of supervising teachers who would, after receiving in-service training in the performance-based approach to teacher education, then work with student teachers. This nucleus of experienced teachers would also provide the staff needed to train both future supervising teachers and student teachers. Such an approach would be consistent with suggestions in the new certification guidelines related to the development of consultant-level personnel.[2]
3. In-service meetings and workshops involving supervising teachers, university or college staff, and representatives from the professional organizations would be held

to work out specific applications of a cooperative program in terms of needs and resources of each of the organizations. Typical items to be considered might include:

a. Descriptions of program objectives, activities, evaluation procedures, and responsibilities of all staff involved in the program.

b. An assessment of the need for in-service training or reeducating of staff in the performance-based, behavioral objectives approach to teaching and teacher education, with emphasis on the training of supervising teachers.

c. A consideration of the most feasible means for carrying out such training, including time, personnel, facilities needs, and costs of an in-service program.

d. Facilities, equipment, and staff available to support intern training activities including microteaching and other media-associated activities.

If cooperating agencies were to base programs on previously developed models such as the Career Teacher Project, a program of meetings to plan, coordinate, and provide in-service training would be less expensive and, hence, more feasible in terms of administrative costs than were the coordinating committee sessions connected with the pilot project since an initial research and development would not be necessary. An additional support for administrative feasibility may be found in the fact that cooperative programs could be built for the most part on established relationships between universities and districts.

Educational Feasibility

The cooperatively planned program carried out in the pilot project resulted in a continuous training program with interns acquiring, practicing, and developing teaching competencies in both campus and district locations. Similar efforts in joint planning would, likewise, have a high potential for success if based on a solid foundation of understanding and agreement with a continuous flow of communication between the organizations involved.

Human Factors Feasibility

The concept of university-district cooperation in planning and implementing teacher education programs is one with historical and practical roots. The practice of student teaching in a school district under the supervision of an experienced teacher is an established one. Therefore, it was not surprising to find unanimous agreement among university staff and school district personnel toward the desirability of university-district cooperation.

Translating this favorable attitude into actual practice is a challenge because both parties must agree on the ground rules governing the implementation and evaluation of a jointly developed program. At this point, a knowledge base becomes a critical factor. Such knowledge needs to be acquired early in the building of the college-district cooperative relationship by all the staff involved in the program, particularly the supervising teachers.

Acceptance of the principle of early and knowledgeable involvement of college and district staff as a means of expediting and maintaining strong college-district linkage raises the need for training personnel engaged in planning, implementing, and evaluating activities. Pilot study experience indicates that as supervising teachers become aware of and understand the basic program objectives and procedures, particularly the observation and evaluation of behaviorally stated teaching competencies, the human factors dimension of university-district cooperation becomes more positively oriented.

As reported, little emphasis was placed on the direct, formal training of supervising teachers in the demonstration or even the recognition of performance-based teaching competencies. It was also apparent that a number of teachers were not aware of program objectives and changes in the supervisory program that would be needed to reach those objectives, specifically, the need for teachers to observe and evaluate teaching according to performance criteria.

As such knowledge was acquired, however, usually through conferences with the intern or the project coordinator, the teachers became more cooperative as well as more competent.

It would seem then, that although the supervising teachers eventually demonstrated competency in observing and evaluating intern teaching behavior and developed a positive set toward project activity, the early development of skills and attitudes by the supervising teachers might have brought about a higher degree of university-district cooperation at an earlier period.

Therefore, in proposed applications a priority should be placed on early in-service education of staff personnel, especially supervising teachers, as a means of providing the knowledge base needed for cooperative execution and evaluation of a joint college or university-district teacher education program.

Performance-Centered Objectives

Administrative Feasibility

The fact that colleges and school districts might not now be basing preparation and certification programs on performance standards does not provide a logical reason for not considering this approach. Actually, the findings and theories upon which this type of program is based are recent and, considering the rate of diffusion of educational innovations, one would not expect to find any widespread employment of this approach at this time.

A decision as to the feasibility of a performance-centered objectives base for preservice and in-service training should be considered first as to the desirability of such an approach and second as to the administrative resources needed to support such a program. Based on conclusions drawn from the Career Teacher Project, it would seem generally feasible for colleges and school districts to plan and implement programs based on performance objectives.

In considering a wider scale application of the performance-centered objectives approach to teacher preparation, the question of orientation and in-service training of those personnel responsible for conducting program activities is an important one. This dimension of the Career Teacher Project was accomplished through a program conducted by the project director and Bellevue administrative personnel.

Considering the time and costs of such an in-service program at each of as many as 10 cooperating districts, it is apparent that the Career Teacher Project in-service model would require modification before it could be considered administratively feasible. Still, it would appear from observation of the cooperating teachers' supervisory and evaluation efforts that some sort of an in-service training program is needed to insure continuity of the program activities and intern evaluation over an entire year. Such a program, even of limited scope, should contain the following elements:

1. A statement should be developed outlining responsibilities of the participating staff. In the case of supervising teachers, some sort of printed checklist or brochure describing specific duties should be included.
2. The total program should be presented and discussed, especially the portion to take place in the district. District staff need to see the total picture and the major differences between the new in-district program and the more conventional student teaching activity.
3. Formal course work, workshops, or seminars should be conducted as needed early in the program to train supervising teachers to work with the definition, observation, and evaluation of teaching performance behaviors. Specifically, supervising teachers should be provided an opportunity to acquire and demonstrate the competencies required of the student teachers, with provision for the teachers to see and discuss their performances. Evaluation instruments to be used should be discussed and tried out, again using the supervising teachers as videotaped

models. Such training would serve to prepare experienced teachers to attain the consultant-level certificate if desired. Training might be conducted on campus for key personnel of several districts or accomplished on an extension basis in the districts using qualified college or district personnel (or both) as the trainers. In either case, the goal would be to train a cadre of teachers who would then conduct further in-service training of other personnel in order to maintain a continuous training program.

4. After training has been accomplished, occasional meetings should be held for progress reports, discussions of problems, and in general should serve as links in an on-going chain of communication.

A possible scheduling procedure might be to have workshops and seminars in a compressed time period, rather than to have several meetings spread out over several months as in the Bellevue model.

In-service training efforts, admittedly, will be costly in time and money, especially if a college or university bases an entire teacher preparation program on the performance standards approach. However, a carefully planned and executed effort, particularly with the cooperating teachers, is vital if the goal of an integrated and continuous program is to be realized.

Educational Feasibility

The results of the program, in terms of student success in acquiring and demonstrating competencies both through systems activities and through teaching experiences, lends credence to the value of the performance-centered approach to teacher education. The specific behavioral competencies acquired and practiced seem representative of what teachers do when teaching effectively. It would seem educationally feasible, therefore, to base a cooperatively planned and developed teacher education program on the performance competencies model.

Human Factors Feasibility

In view of the generally favorable attitudes of both university and district staff toward performance-centered objectives, such a basis for a teacher preparation program would likely find acceptance in other colleges and school districts as well. However, because of the connotative loadings of such words as "behavioral objectives," "performance tasks," and "competency behaviors," a vital key to the acceptance of this approach would be based on the development of an understanding of what performance-centered objectives are and how they fit into the systematic development of teacher education programs. The proposed in-service education program, stressing the development of supervising teachers' skills in working with a performance objectives training approach, should provide a powerful medium for the early attainment of both understanding and acceptance.

Instructional Systems

Administrative Feasibility

Following are alternate plans which represent potentially feasible means of accomplishing the appropriate learner objectives through the medium of task systems. It is assumed that a university or college might wish to use any or all of the 15 task systems developed in a form closely approximating the original. Therefore, no costs for redesign or further research and development are provided.

Staffing--Plan A

Plan A represents a straight extrapolation from a sample of 25-30 to a population of 600 students, assuming the same general program format as in the pilot project. The extrapolation factor is 20, or 600 ÷ 30. Assuming duplicate programs during a two-semester school year, the factor then becomes 10, or 20 ÷ 2. Plan A, therefore, is based on the assumption that in a given semester of on-campus systems operations, the number of instructional staff needed would be 10 times that needed for the pilot program. The factor for a three-quarter program would be 6-2/3, or 600 ÷ 30 ÷ 3.

Table 28 illustrates the increased staff needs for a maximum operational application of the Career Teacher Project systems element at a two-semester-year university, following the same procedures as in the pilot study.

TABLE 28

INSTRUCTIONAL STAFF NEEDED TO SUPPORT
MAXIMUM OPERATIONAL APPLICATION

30 Interns per Semester	300 Interns per Semester
1/3 staff (professor) .... (10-15 hours per week)	3-1/3 staff needed (FTE)
1/4 staff (teaching assistant) .... (10 hours per week)	2-1/2 teaching assistants needed (FTE)

According to Table 28, 3-1/3 staff personnel would be needed to manage the instructional systems component for 300 students. In a realistic situation, this FTE figure would probably represent partial loads for more than 3 to 4 staff with systems work the responsibility of as many as 10 staff members, each working with one group of 30 students. The teaching assistant requirement might reasonably be satisfied through the full-time use of 2 assistants, each working with four groups, and one-half of another's time, with a two-group load.

Staffing figures include time for systems revision as needed, one-to-one conferences, evaluation, and a limited number of class meetings. Clerical assistance would not require any significant increase over that normally required to support 3 to 4 staff FTE's. The staffing figures for Plan A seem administratively feasible.

Staffing--Plan B

This plan assumes that several or all of the instructional task systems are assimilated into the existing courses in methods and educational measurement. In this approach, students acquire the same competencies but in different environments with different opportunities to practice. It seems likely that some staff might elect to incorporate systems tasks into their programs and some would not. It is possible, also, that a combination of Plans A and B could operate simultaneously in any one institution.

Staffing--Plan C

Plan C assumes that all or some of the task systems are accomplished during the in-district phase of the program. Systems task could become units of work in the study-observation time block of the in-district semester or quarter. In this event, the supervisor would become the primary instructional manager. Tasks could still, however, be used, in addition, on campus in Plans A and B. Thus, it would be possible to combine the three approaches depending on the needs of students and resources available.

Facilities--Plan A

Plan A, incorporating all systems work within a semester, presents some problems in terms of the use of facilities to be made by 300 students. The one potential trouble spot would be finding adequate viewing space for the time needed to complete media-augmented tasks. To insure feasibility, it would be necessary to modify the individual mode approach to learning, at least in terms of media work. Using the pilot study data as a guide, it would be reasonable to assume that students could view filmstrips in small groups rather than on an individual basis, since group viewing was the practice generally followed.

The media facility utilization rate for the pilot project was 17%. Assuming that this time represented 20% of total time available for project use, it would be possible for five groups of 30 each to use the facility during the time alloted. By making the facility available at night or by changing the order of tasks within groups in order to spread facility demand over a longer period of time, the additional five groups could be accommodated. As described in the presentation of pilot data, the size of an individual viewing group at any one showing of a filmstrip-tape ranged from 1 to 11 students.

Facilities--Plan B

Plan B would require that all students view the filmstrips but activities would be oriented toward large group viewing. Since the only equipment needed is a tape recorder and a filmstrip projector, such work could be in an auditorium or classroom, thereby alleviating pressure on media laboratory facilities.

Facilities--Plan C

Facilities use for Plan C would be handled by the coordinator-supervisor to the resident center. Interns could use media facilities in a central area or could use materials in their respective schools. With no more than 30 in a center, facilities use would be decentralized to a large degree. Assuming some sort of cooperative college-district effort, district facilities might well be utilized in accomplishing task systems in the district environment.

Grading

One problem that faces the instructor when using the systems approach is that of grading. One of the basic tenets of the systems is that virtually all entering the system can eventually succeed. Such an assumption requires several paths to the same objective and perhaps a different or modifiable set of criteria for individual students. Also assumed is that the students are not all under the same time pressure or deadlines.

One possible grading system for use with the systems approach might be a pass-fail approach with several gradations in the *pass* category. Since several Washington institutions are trying out forms of pass-fail grading, it might be profitable to consider the feasibility of a large scale use of this approach.

Educational Feasibility

Although the systems were effective in assisting students to acquire and demonstrate desired competencies, evaluative criteria were not finely developed enough to provide a means of determining precise gradations in performance beyond the minimal levels. Consequently, any institution contemplating the operational use of the 15 task systems described should also be prepared to refine procedures and criteria to be used in evaluating student growth.

Human Factors Feasibility

Prospective staff, including student interns, should become familiar with the learner-centered emphasis of the systems tasks. Such knowledge and awareness would seem necessary if staff members are to gain satisfaction from the new kinds of instructional responsibilities associated with the systems approach.

In addition, modifications of systems tasks in accordance with student reactions to specific tasks and general classes of tasks, particularly in the areas of sequence, length, and frequency of evaluative feedback, should enhance favorable student attitudes toward systems tasks.

Microteaching

Administrative Feasibility

This element would not seem to be administratively feasible if used with a large number of trainees as in Plans A and B in a campus setting geographically removed from a large population center. If, as in Plan C, the number of students were smaller, as would be the case in a residence center, it would seem feasible to use microteaching techniques, mainly because of the reduced need for public school students. Ideally, in an in-district setting, interns could teach microteaching component lessons to their own classes of children at appropriate times. Supervisors might then tape the activity using portable equipment and provide evaluative feedback and counseling later in the day.

As would be the case with the employment of other systems tasks in a cooperative college-district program, resident supervisors might realistically plan to work in cooperation with school district personnel in accomplishing microteaching activities.

Educational Feasibility

Very likely the educational feasibility would be enhanced if interns were to engage in videotaped interaction tasks within their own classrooms. The relevance or immediacy would be an advantage and would provide for ease in planning the lesson to be microtaught.

Human Factors Feasibility

With the increased realism factor inherent in videotaping of actual teacher-student interaction, the human factors feasibility dimension should prove to be an even more satisfying experience than was the more limited on-campus microteaching activity.

Sensitivity Training

Administrative Feasibility

The question of whether it is feasible to extend the sensitivity training element to all seniors in a teacher preparation program cannot be answered on the basis of administrative considerations alone. In fact, such considerations are not even important unless the program is deemed advisable and beneficial for all students. If a decision were made to make sensitivity training available to all students, there are several ways in which sensitivity training might be conducted on a large-scale basis. These include:

1. Small group meetings (10 to a group) could be conducted on a weekly basis as in the pilot study model. Sessions might be led by trained graduate students as an economical way of providing the 30 hours of training per week needed to accommodate 300 students on a once-a-week basis.
2. Some students might engage in sensitivity training in regular courses with others receiving the training as in "1."
3. Sensitivity training seminars might be conducted in the school district by college or school district staff. Meetings might be held in conjunction with or in lieu of the conventional weekly seminar. In all arrangements, such training should help to facilitate individual and small group adjustment to the program and to the more individual mode of instruction.

Educational Feasibility

This dimension is not considered applicable.

Human Factors Feasibility

Although the general feeling at the end of the sensitivity training program was favorable, there seemed, at the time, to be a lack of data on which to decide whether such a program should be extended to all senior education students.

For example, one possible outcome of the training was the fact that the interns appeared to interact well with each other and with the project staff. Meetings were open and opinions exchanged freely. This climate could, however, have been a product of the Hawthorne effect which seemed to be pronounced in the group. The interns, who had been selected for the program during the spring semester prior to the pilot year, had met in small and large groups for orientation at that time. At the beginning of the fall term, the interns had become well identified as the M-STEP group. Since the group knew they would be together throughout the year, this sense of identity and the Hawthorne effect might well have been the reason for the apparently effective group interaction and openness.

Before a decision should be made to make the sensitivity training element a part of the regular program for all, more research into the product of such training seems advisable. The administrative problem of providing staff and facilities for a large number of small groups is a significant one. Such a step should be considered only after more study is made of the values to the individual intern of sensitivity training.

Nonclassroom Activity

Administrative Feasibility

The program element concerned with provisions for a block of time to be used for study, planning, and observation during the in-district semester was one of the most difficult to implement. In fact, this element was considered unfeasible in the pilot form because teachers and interns generally de-emphasized this dimension, instead concentrating almost all time and energy on the classroom teaching function.

This element, generally concerned with time for nonclassroom activities and responsibilities could be workable in an operational setting provided that supervising teachers and interns observed study-teaching time ratios suggested by the program planning staff. The allocation of time for nonclassroom activities was a critical problem in the pilot study. If the Plan C alternative were adopted which would provide for competencies acquisition through systems tasks in the in-district semester, the need for effective time management would be even more important.

In planning for operational application of a program similar to the Career Teacher Project, an attempt should be made early to clearly spell out the nature of the program structure to be followed and to emphasize the need for adherence to program procedures. This could be accomplished through early involvement of cooperating teachers in program planning and through an in-service program designed to develop both knowledge of and favorable attitudes toward the new procedures.

Educational Feasibility

Educational feasibility would be possible if cooperating teachers and interns planned programs allowing time for non-classroom activities such as planning, observation, and study.

Human Factors Feasibility

This feasibility dimension could be improved through clear communication of program goals and procedures, particularly in reference to those areas in which the performance-based program and conventional programs differ.

In-district Course Work

Administrative Feasibility

The in-district course work program element did not prove to be administratively feasible because of constraints caused by funding and scheduling. Even assuming.adequate financial resources needed to make one 30-student unit feasible, a simple extrapolation to 10 such units per semester would raise further questions as to the college or university's ability to support a full-scale program involving staff members traveling to the various resident centers six times each semester.

Assuming a Plan A or pilot study model element, the funding problem might be increased by 10. The scheduling process would be even more complex because of a need to schedule specialists in a multitude of locations. Based on the pilot project results, however, several other alternatives might be considered to improve the potential feasibility of this element. These include:

1. Fewer staff meetings with students with more emphasis on self-instructional materials and activities.
2. Meeting at fewer locations, i.e., two or more groups might meet together with staff at a location convenient to groups involved.
3. Utilization of college or university staff from other than the student's home institution with provision being made for reciprocal credit arrangements.
4. Utilization of school district personnel to teach needed courses such as reading or guidance. Such personnel would be the top specialists in their fields in the district and would function in clinical roles.

A decision on any or all of these alternatives or on the original model would be made based upon a consideration of needs and resources of both college and district organizations. Presumably, from such considerations an administratively feasible form of this element could be developed.

Educational Feasibility

In the pilot form administrative constraints affected the overall educational quality of course offerings by the traveling university staff. Consequently, the feasibility evaluation was feasible--with qualification. An improvement in the funding and scheduling of traveling staff and/or the use of alternative measures for providing staff and course work should enhance the educational feasibility of this program element.

Human Factors Feasibility

With improvements in the administrative feasibility dimension, human factors feasibility would, likewise, be improved, since the time conflicts and pressures on the students would be minimized through improved programming and procedures.

Seminars and Group Meetings

Administrative Feasibility

This dimension is not considered applicable.

Educational Feasibility

This dimension is not considered applicable.

Human Factors Feasibility

Seminars and group meetings are a regular part of the student teaching program. These meetings are similar in objectives and format serving as a means of disseminating administrative information, sharing experiences, and observing and discussing the educational milieu in which the classroom experiences are taking place. In the light of pilot study experiences, the only suggestion to be made in considering the incorporation of this element into a regular program would be that meetings be for shorter periods of time, preferably one hour, and less frequently.

Classroom Teaching

Administrative Feasibility

Considering the proposed program model, a need would exist for the placement and supervision of 600 student teaching interns in a given year. Specifically, 300 students would need to intern each semester for a semester-long block of time. Likewise, 300 supervising teachers would be needed each semester. If the institution were on a quarter system, the need would be for 200 teachers per quarter.

Assuming that in the conventional program, an institution placed student teachers in four blocks of 150 students each, the need per semester would be for placement of 300 student teachers. Since several institutions make it a practice not to place student teachers back-to-back or two time blocks in a row with a given supervising teacher, the same requirement for 300 supervising teachers exists in the conventional program as well as in the innovative model.

It seems feasible then to expect that an institution can conceivably extend the student teaching internship period for each student from one-half to a full semester without exhausting the pool of prospective supervising teachers.

Another important scheduling requirement for student teaching is that of placing students in appropriate resident student teaching centers. A maximum application of the semester-long internship experience would involve 30 students per supervisor in a total of 10 such centers. In some cases, a staff increase would be required; in other situations, fewer supervisors would be needed. In most instances, student teaching or internship supervisors are added routinely in response to increases in the number of students needing the in-district experience.

Educational Feasibility

The conclusion drawn from the pilot project data was that a semester-long experience was educationally feasible and desirable. Since the most basic learning relationship was the intern-r one, extending the numbers of these one-to-one units not affect the educational feasibility.

Factors Feasibility

The factor of a semester off campus seemed the most crit- n the pilot study. The two specific concerns were the t's being away for 18 weeks instead of 9 and the expenses ed in living in the student teaching area for an entire er.

The interns were not concerned about the first factor to al extent, the perceived benefits of the program seemingly ghing any desire to get back to the campus. During the er, interns did, on occasion, go back to Pullman to check grams, meet with professors, and visit with friends. It ppear that a larger number of interns would have no more s, proportionately, than did the interns in the Career Project.

The factor of expense, likewise, does not appear to be a one. Since several of the institutions that might con- dopting elements of the pilot program are resident ones, dents pay some sort of living expenses either in dormi- , fraternity or sorority houses, or off-campus apartments. r words, the intern, unless living at home, has similar xpenses whether in the conventional one-half semester r in a semester-long version. Although costs vary from to location, additional costs would be incurred for a f 8 weeks or less, depending on whether the institution semester or quarter basis.

Supervision and Evaluation

Administrative Feasibility

The cost factor in staffing residence centers for the type of supervision and evaluation program carried out in the pilot project would be the same as in a more conventional program. One supervisor FTE would be needed for each 30 interns, each 1:30 staffing ratio constituting a separate unit. To handle 300 students per semester, 10 supervisors would be required.

Assuming an in-district operation which would complement a Plan A or B on-campus program, the staff supervisory and coordinating duties would be the same as in the Career Teacher Project. The one exception would be that the supervisor would accomplish the job on a full-time assignment basis.

If, under Plan C, competencies acquisition through systems tasks were to be accomplished during the in-district period, the supervisor would have the responsibility for managing the learning efforts of the 30 interns in the center. His role, at times, would be similar to that of the campus professor in Plan A.

In a cooperatively planned program, the supervisor could reasonably expect to work with district specialists who would assist in the preparation of the interns. Special areas might include assisting with videotaping projects, providing orientation to district guidance services, etc. Since the district would be working the teacher preparation institution from the initial stages, the school staff would have more at stake in the total preparation effort than may have been the case in more conventional programs in which supervision and student teaching were at best something to be tolerated by district personnel.

The question of which institution, the college or the school district, should provide and pay the salary of the intern supervisor is one which might be answered differently based on the college-district relationship. Traditionally, the job and actual personnel have been the responsibility of the colleges. Now, with an emphasis on joint college-district planning of teacher preparation programs, the possibility of joint support and staffing seems promising.

In the light of emerging interest in preparing new college staff members with interests and competencies in teacher education, it might be possible to augment the resident center staff through the addition of a doctoral candidate-level intern who would assist the coordinator-supervisor. Such a person would have a one-half time assignment in the center and might, in addition, be conducting research or writing the dissertation. Although this type of assignement does not seem feasible for each center, it would seem possible to provide such an assignment, funded as a teaching assistant, for those interested individuals pursuing the doctorate in teacher education.

The increased need for involvement of cooperating or supervising teachers in performance objectives-based teacher supervision and evaluation programs raises the question of compensation for teacher services outside of the school day. Such activities as in-service workshops to learn and practice evaluation procedures and the additional workload of supervising interns were mentioned at various times by pilot project teachers and were at the root of some dissatisfaction with the program. In light of Career Teacher Project experience, some consideration should be made of a possible need for payment for services beyond normal teaching responsibilities. The traditional honorarium is not meant to provide realistic compensation for services and, therefore, is inadequate as a means of paying for the extra time expenditures of staff personnel.

Educational Feasibility

In moving from the pilot study to an operational application, the most important consideration regarding educational feasibility seems to be that of the type and amount of in-service training needed to enable cooperating teachers to effectively supervise and evaluate the teaching interns. Such an effort, if successful, would favorably affect the feasibility dimensions of any and all of the in-district program elements.

Results of the pilot study seemed to indicate that the in-service procedures were satisfactory in terms of preparing teachers to evaluate intern behavior. This training was more of an orientation to the program and did not stress acquisition of competencies such as an ability to write behavioral objectives in one or more domains. In reality, teachers learned the behavioral observation and evaluation procedures through working with the interns and the coordinator-supervisor.

A more direct approach and one which might, conceivably, produce an earlier payoff in terms of understanding and acceptance of supervision and evaluation procedures would be to conduct in-service training for supervising teachers to be involved in the new performance-based teacher education program.

Depending on how many in-district program elements were to be tried out or adopted, efforts would be made to describe the characteristics and mode of operation of each element, i.e., study-teaching time ratio, frequency of intern performance evaluation, etc. Further, some assessment should be made of the cooperating teachers' knowledge of and attitudes toward new procedures and new supervisory and evaluative responsibilities. In addition, teachers should be provided an opportunity to acquire, practice, and demonstrate the competencies requisite to the job of implementing specific behaviors by student teachers. Through their training and actual work with student teachers, the supervising teachers might also satisfy criteria to be met in their own attempts to attain consultant-level certification.

As mentioned, one approach to achieving the goal of developing supervising teachers capable of demonstrating, observing, and evaluating teacher performance behavior would be to first train a cadre of teachers who would in turn assume training responsibilities for both beginning and experienced teachers in the district.

Human Factors Feasibility

Early involvement of cooperating teachers in the planning effort and a strong in-service program in which procedures and responsibilities are spelled out and training provided should result in positive attitudes toward new supervisory and evaluation duties to be assumed by district program staff.

Summary

Following is a summary of projected applications of program elements (see Table 29). Feasibility decisions are based on the extrapolation of pilot data.

TABLE 29

SUMMARY OF PROJECTED APPLICATIONS

Program Element	Type of Feasibility Decision								
	Administrative			Educational			Human Factors		
	Yes	Qualified	No	Yes	Qualified	No	Yes	Qualified	No
University-district cooperation	X	.	.	X	.	.	X	.	.
Performance-centered standards	X	.	.	X	.	.	X	.	.
Systems	X	.	.	X	.	.	X	.	.
Microteaching	X[a]	.	.	X[a]	.	.	X	.	.
Sensitivity training	.[b]	.	.	.[c]	.[c]	.[c]	X	.	.
Nonclassroom activity	X	.	.	X	.	.	X	.	.
In-district course work	X	.	.	X	.	.	X	.	.
Group meeting seminars	.[c]	.[c]	.[c]	.[c]	.[c]	.[c]	X	.	.
Classroom teaching	X	.	.	X	.	.	X	.	.
Supervision evaluation	X	.	.	X	.	.	X	.	.

[a] Feasible in Plan C only.

[b] More data needed before decision can be reached.

[c] Not applicable.

Conclusions

This study was designed and executed to assist college and school district administrators by providing both specific and generalizable indicators of the feasibility of program elements of the Career Teaching Project.

In moving from the pilot study to a generalized operational model, an attempt was made to consider both a simple extrapolation mode and other alternative organizational patterns and procedures. Where assumptions could be made about causes for a lack of feasibility in the pilot form, remedial action has been suggested in order to promote feasibility in future operational situations.

Areas in need of further research and development have been mentioned and include:

1. Design of evaluation criteria to provide finer gradations of student performance levels.
2. Modification of systems tasks to provide better sequencing, shorter steps, and more frequent evaluative feedback and reinforcement.
3. More precise study of the results of sensitivity training of the type provided the interns and a weighing of these results against the cost of providing such experiences for large groups of trainees.

Finally, it should be recognized that this study alone is not sufficient basis for an administrative rejection or adoption of Career Teacher Project program elements for use in a specific institution or school district. Such a decision would be made, presumably, through a consideration of the feasibility assumptions of the study as related to the objectives and resources of a given organization. This study, therefore, is intended to serve as an informational component in the administrative decision-making process.

Footnote References--Chapter V

[1] *Statement of Standards for Preparation of School Professional Personnel Leading to Certification* (Olympia, Washington: Superintendent of Public Instruction, April, 1968), p. 8.

[2] *Ibid.*, p. 2.

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APPENDIX A

BEHAVIORAL OBJECTIVES AND SELECTED TASKS

BEHAVIORAL OBJECTIVES FOR CAREER TEACHER PROJECT

I. Determine Objectives.

Task 1. Define "behavioral objective" and list characteristics of behavioral objectives.

Task 2. Distinguish between objectives which are behaviorally stated and those not so stated.

Task 3. Write behavioral objectives for learning activities appropriate to trainee's special field of teaching.

Task 4. Write objectives for own field for cognitive domain of behavior: (a) for knowledge level of behavior, and (b) for higher levels of behavior.

Task 5. Write objectives for own field for affective domain.

Task 6. Write objectives for own field for psychomotor domain.

Task 7. From Bellevue curriculum guides and other sources, trainees select examples of objectives which illustrate (a) convergent thinking, (b) divergent thinking, and (c) evaluative thinking.

Task 8. Trainees state how the objectives they have written for preceding tasks are appropriate to (a) societal needs, (b) developmental needs of the youth he will be teaching, and (c) structure and methods of inquiry of the discipline from which the objectives are drawn.

II. Modify objectives to meet individual differences.

Task 9. State prerequisites for given objectives.

Task 10. Write descriptions of procedures for assessing the degree to which different types of learners are likely to possess the necessary prerequisites for a learning task (including, interpret individual Bellevue student scores and profiles obtained from batteries of standardized tests).

Task 11. Write modified objectives for different types of learners.

III. Select media which implement appropriate practice of the desired pupil behavior.

Task 12. Choose from among available media and justify choices in terms of (a) relevance of content, and (b) appropriateness of media's characteristics to the desired behavior.

Task 13. Select media appropriate to different learners' characteristics.

Task 14. List sources of media available for trainee's special fields.

Task 15. Construct examples of types of media useful in special field.

IV. Organize the learning environment.

Task 16. Write plans which place in appropriate sequence (a) anticipated pupil activity, (b) teacher actions, and (c) media; allot necessary time for aspects of the plans.

Task 17. In simulated classrooms, place equipment, media, and pupils to facilitate different types of activity.

V. Interact with students.

In each of these five types of situations, interact with pupils effectively by (a) eliciting frequent pupil responses and (b) reinforcing appropriate responses:

Task 18. Describe to pupils a specific learning task, and elicit responses which indicate a favorable "set" toward the task.

Task 19. Elicit responses which indicate practice in acquiring knowledge.

Task 20. Elicit responses characterizing convergent thinking, or behavior at the comprehension or application levels of the cognitive domain.

Task 21. Elicit responses which characterize divergent thinking, or the analysis or synthesis levels of the cognitive domain.

Task 22. Elicit responses indicating evaluative thinking.

VI. Evaluate student progress.

Task 23. Write test items which adequately sample behavior described in previously written objectives.

Task 24. Appraise student performance according to criteria based upon objectives.

Task 25. Confer with pupils individually so as to elicit pupil responses indicating a fair appraisal of the pupil's own performance.

TASKS COMPLETED FALL SEMESTER 1967

1. Define "behavioral objectives" and list characteristics of behavioral objectives.

2. Distinguish between objectives which are behaviorally stated and those not so stated.

2b. Identify pupil performance standards in objective statements and construct same.

3. Write behavioral objectives for learning activities appropriate to your field of teaching.

4. Write behavioral objectives for learning activities (appropriate to your field of teaching) at the six levels specified in *Taxonomy of Educational Objectives--Cognitive Domain.*

5. Write behavioral objectives for learning activities (appropriate to your field of teaching) at the first three levels specified in the *Taxonomy of Educational Objectives--Affective Domain.*

6. Write behavioral objectives for learning activities (appropriate to your field of teaching) in the psychomotor domain.

9. Write a linear program (upper limit, approximately 40 frames) which would communicate one of the "bits" of either Task 19, 20, or an appropriate equivalent, at the 2.0 or 3.0 level of the *Taxonomy of Educational Objectives--Cognitive Domain.*

10. Design an instructional system in your own field for achieving a task objective that would include two of the three domains (Tasks 4, 5, 6).

11. Compose preassessment procedures and evaluation items for several objectives of different levels of complexity and from different domains of learning.

18. Describe to pupils a specific learning task objective in such a way as to insure pupil comprehension of the task (communication of task). Attempt to promote and (concurrently) evaluate a favorable reaction set from pupils toward the task (acceptance of task).

19. Communicate to pupils a bit of new information in a way that will insure knowledge of (recall 1.0) and/or comprehension (2.0) of the information.

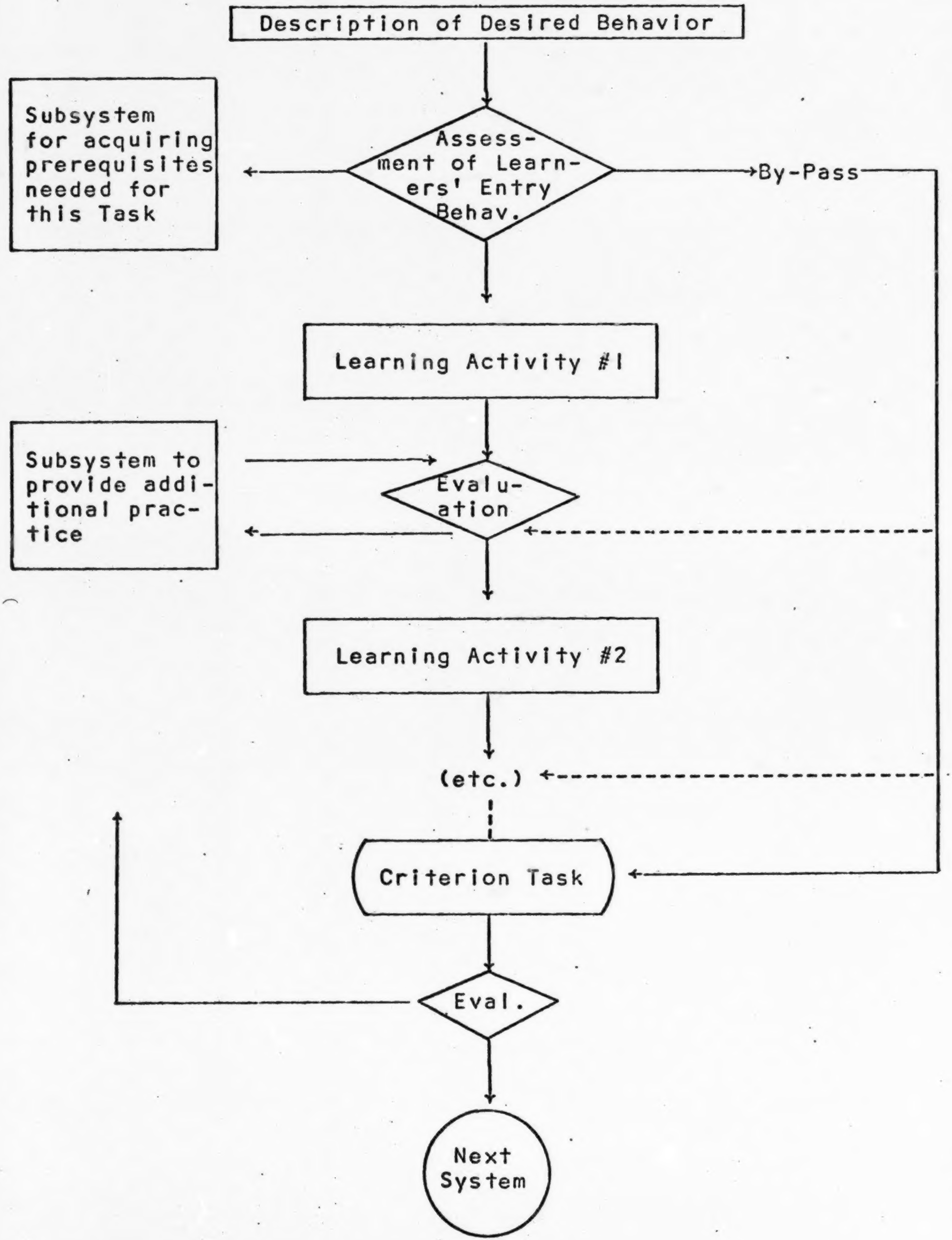
    (Alternate task) Communicate to pupils some specific psychomotor behavior in a way that will allow for practice of the behavior.

20. Elicit responses from pupils indicating the application of a previously comprehended abstraction to the solution of a problem situation.

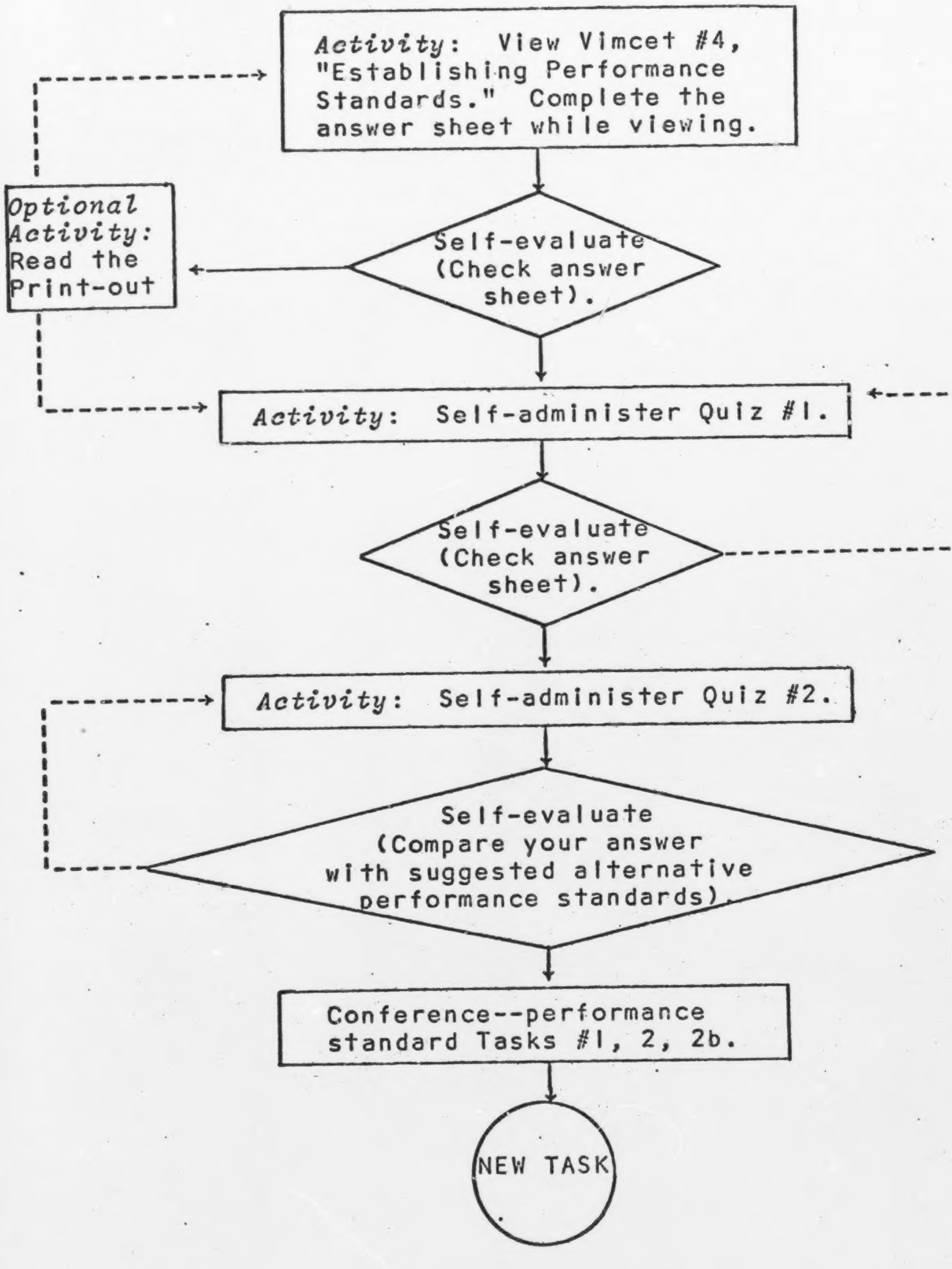
21. Elicit responses from pupils indicating evidence of divergent thinking.

22. Elicit responses from pupils indicating valuing behavior within the 3.0 level of the *Taxonomy of Educational Objectives--Affective Domain*.

SCHEMATIC DRAWING OF GENERALIZED TRAINING SYSTEM MODEL

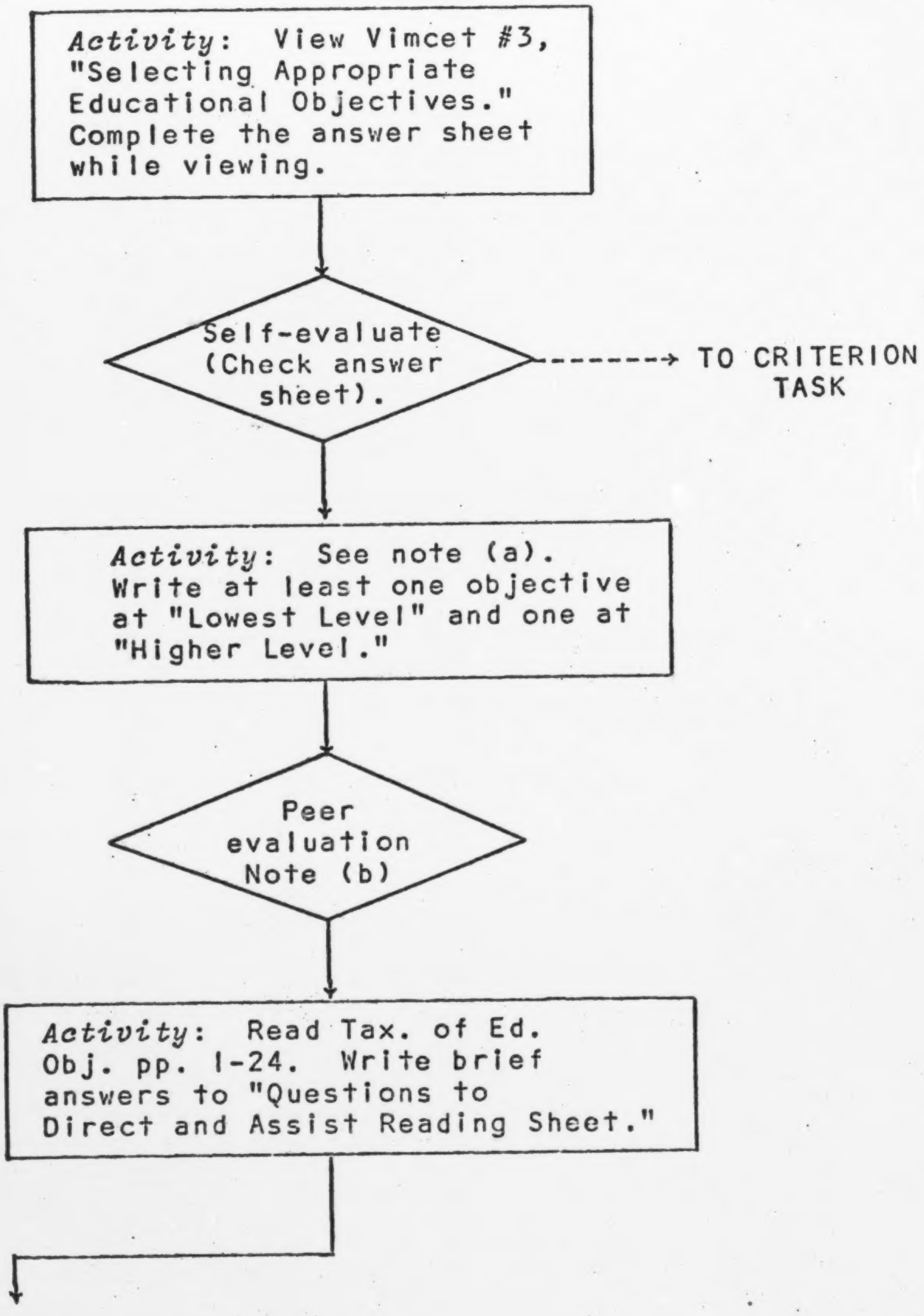

Description of Desired Behavior
Subsystem for acquiring prerequisites needed for this Task
Assessment of Learners' Entry Behav.
By-Pass
Learning Activity #1
Subsystem to provide additional practice
Evaluation
Learning Activity #2
(etc.)
Criterion Task
Eval.
Next System

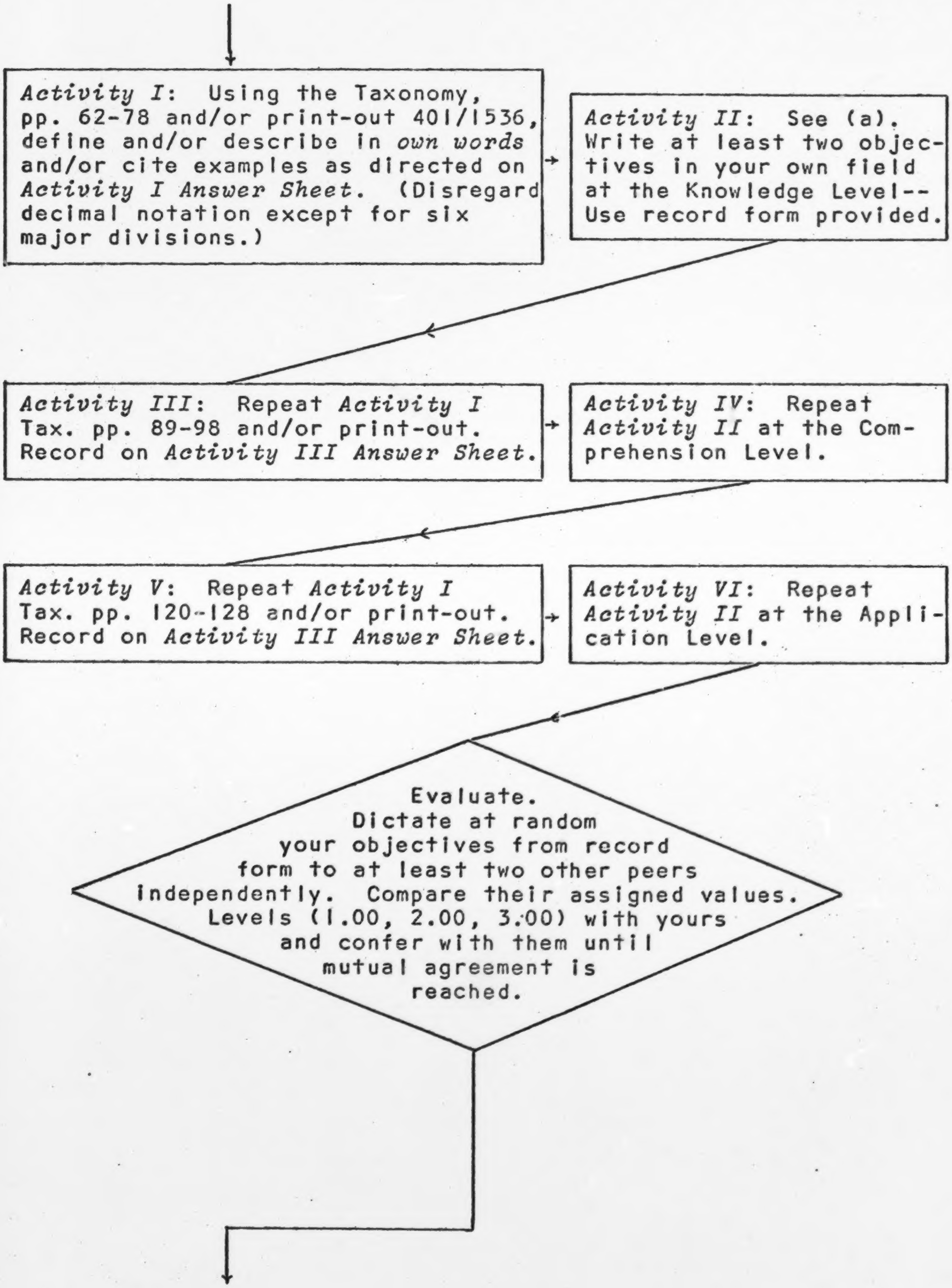
Task 2b: Identify pupil performance standards in objective statements and construct same.


Activity: View Vimcet #4, "Establishing Performance Standards." Complete the answer sheet while viewing.
Self-evaluate (Check answer sheet).
Optional Activity: Read the Print-out
Activity: Self-administer Quiz #1.
Self-evaluate (Check answer sheet).
Activity: Self-administer Quiz #2.
Self-evaluate (Compare your answer with suggested alternative performance standards).
Conference--performance standard Tasks #1, 2, 2b.
NEW TASK

Task 4: Write behavioral objective for learning activities (appropriate to your field of teaching) at the six levels specified in *Taxonomy of Educational Objectives--Cognitive Domain.*

NOTE: (a) Use curriculum guide and/or appropriate texts of Bellevue system as source of objectives.
(b) Work in small groups (preferably four per group) where peer evaluation is indicated.


Activity: View Vimcet #3, "Selecting Appropriate Educational Objectives." Complete the answer sheet while viewing.
Self-evaluate (Check answer sheet).
TO CRITERION TASK
Activity: See note (a). Write at least one objective at "Lowest Level" and one at "Higher Level."
Peer evaluation Note (b)
Activity: Read Tax. of Ed. Obj. pp. 1-24. Write brief answers to "Questions to Direct and Assist Reading Sheet."



Activity I: Using the Taxonomy, pp. 62-78 and/or print-out 401/1536, define and/or describe in *own words* and/or cite examples as directed on *Activity I Answer Sheet*. (Disregard decimal notation except for six major divisions.)

Activity II: See (a). Write at least two objectives in your own field at the Knowledge Level--Use record form provided.

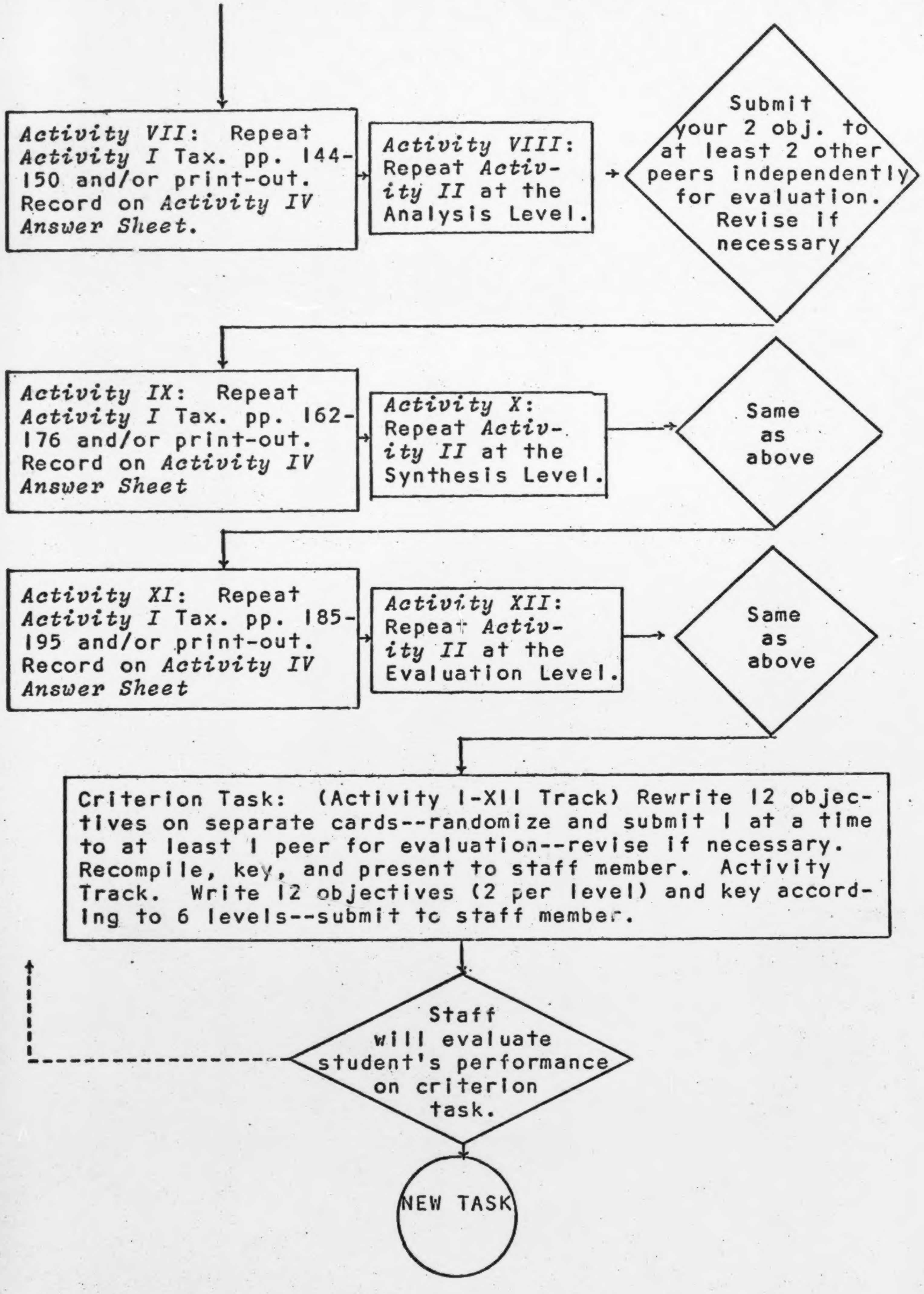
Activity III: Repeat *Activity I* Tax. pp. 89-98 and/or print-out. Record on *Activity III Answer Sheet*.

Activity IV: Repeat *Activity II* at the Comprehension Level.

Activity V: Repeat *Activity I* Tax. pp. 120-128 and/or print-out. Record on *Activity III Answer Sheet*.

Activity VI: Repeat *Activity II* at the Application Level.

Evaluate. Dictate at random your objectives from record form to at least two other peers independently. Compare their assigned values. Levels (1.00, 2.00, 3.00) with yours and confer with them until mutual agreement is reached.



Activity VII: Repeat *Activity I* Tax. pp. 144-150 and/or print-out. Record on *Activity IV Answer Sheet.*

Activity VIII: Repeat *Activity II* at the Analysis Level.

Submit your 2 obj. to at least 2 other peers independently for evaluation. Revise if necessary.

Activity IX: Repeat *Activity I* Tax. pp. 162-176 and/or print-out. Record on *Activity IV Answer Sheet*

Activity X: Repeat *Activity II* at the Synthesis Level.

Same as above

Activity XI: Repeat *Activity I* Tax. pp. 185-195 and/or print-out. Record on *Activity IV Answer Sheet*

Activity XII: Repeat *Activity II* at the Evaluation Level.

Same as above

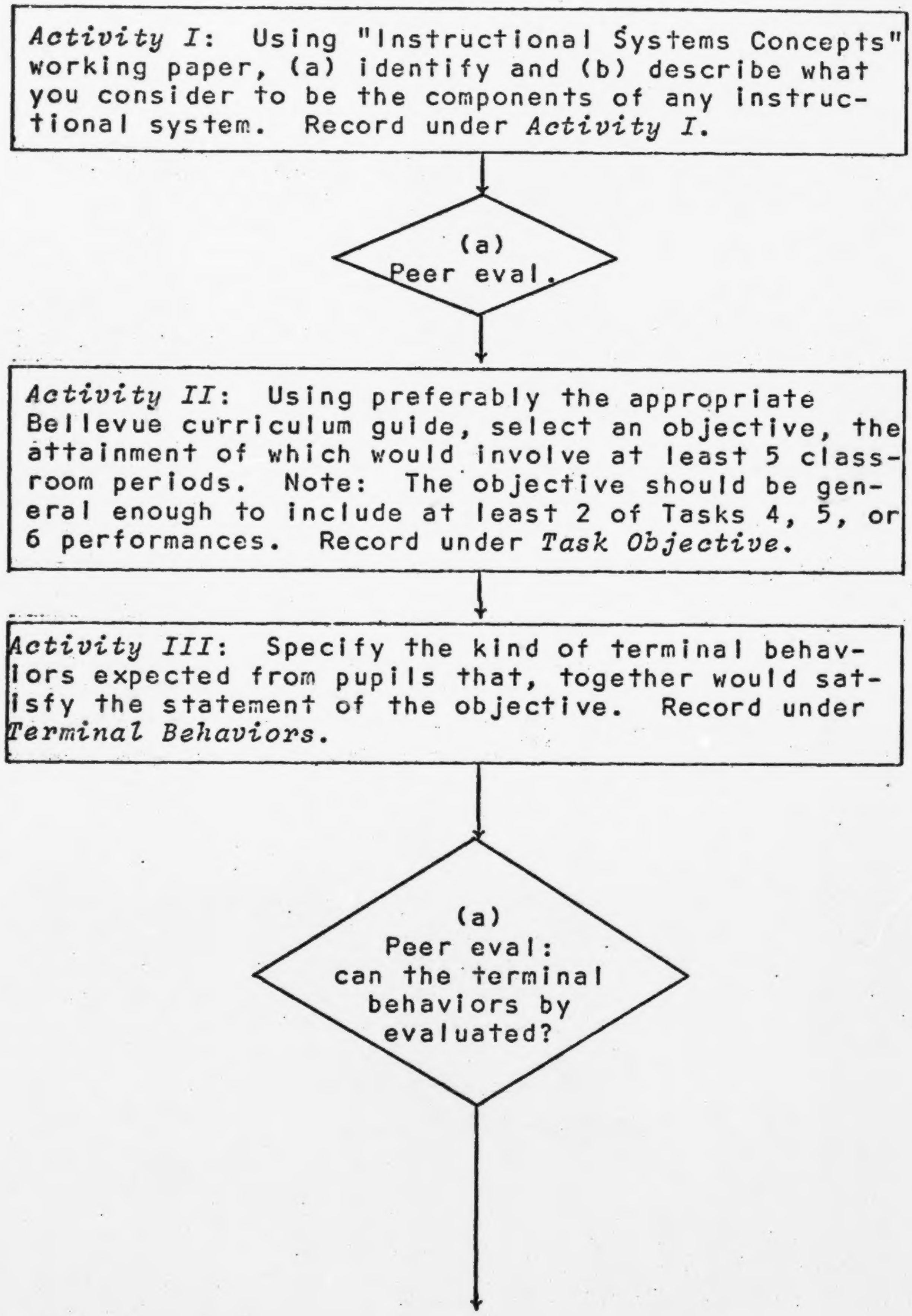
Criterion Task: (Activity I-XII Track) Rewrite 12 objectives on separate cards--randomize and submit 1 at a time to at least 1 peer for evaluation--revise if necessary. Recompile, key, and present to staff member. Activity Track. Write 12 objectives (2 per level) and key according to 6 levels--submit to staff member.

Staff will evaluate student's performance on criterion task.

NEW TASK

Task 10: Design an instructional system in your own field for achieving a task objective that would include two of the three domains (Tasks 4, 5, 6).

NOTE: (a) Where peer evaluation is indicated, one other peer will suffice.



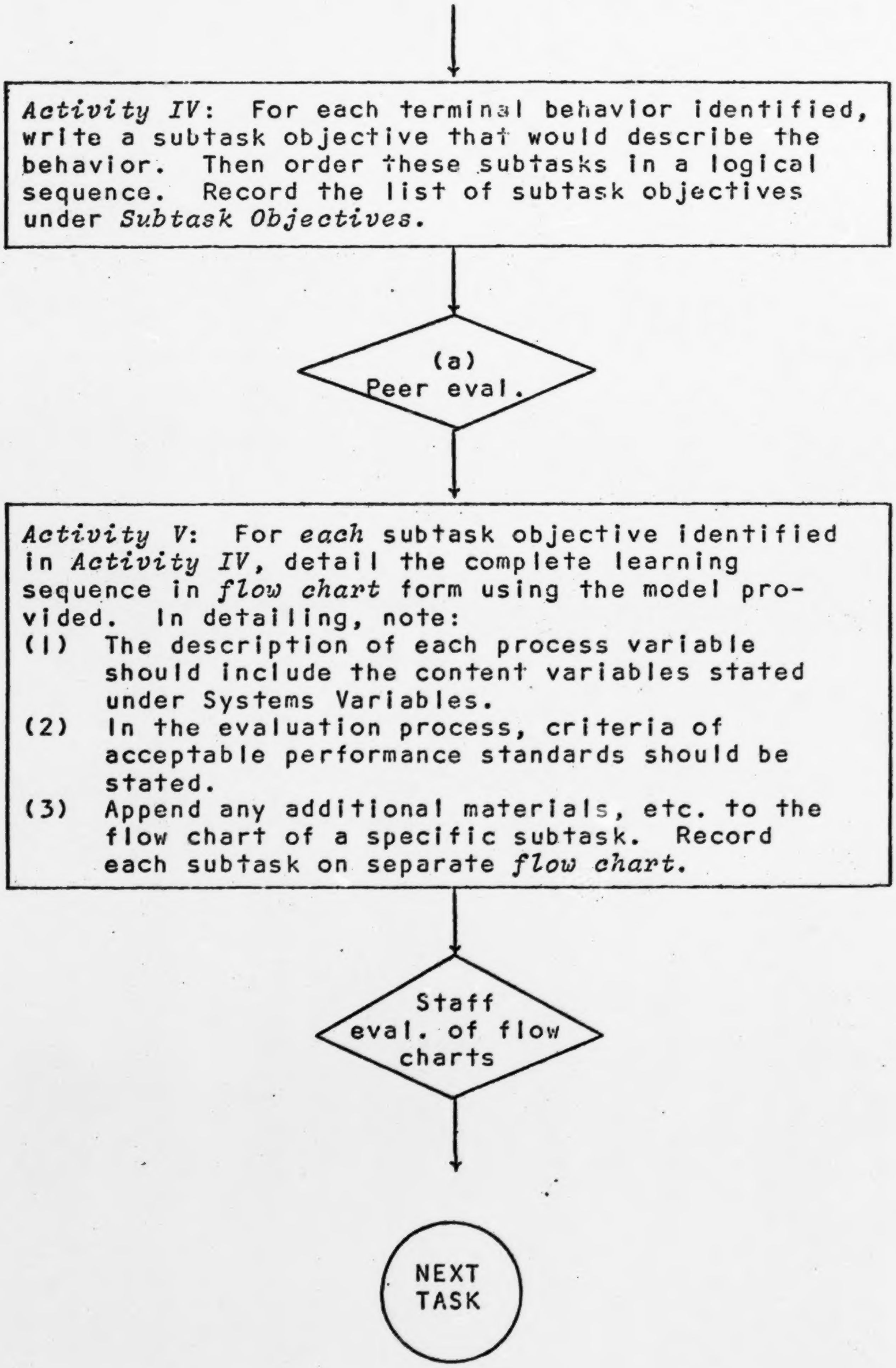
Activity I: Using "Instructional Systems Concepts" working paper, (a) identify and (b) describe what you consider to be the components of any instructional system. Record under *Activity I.*

(a)
Peer eval.

Activity II: Using preferably the appropriate Bellevue curriculum guide, select an objective, the attainment of which would involve at least 5 classroom periods. Note: The objective should be general enough to include at least 2 of Tasks 4, 5, or 6 performances. Record under *Task Objective.*

Activity III: Specify the kind of terminal behaviors expected from pupils that, together would satisfy the statement of the objective. Record under *Terminal Behaviors.*

(a)
Peer eval:
can the terminal behaviors by evaluated?



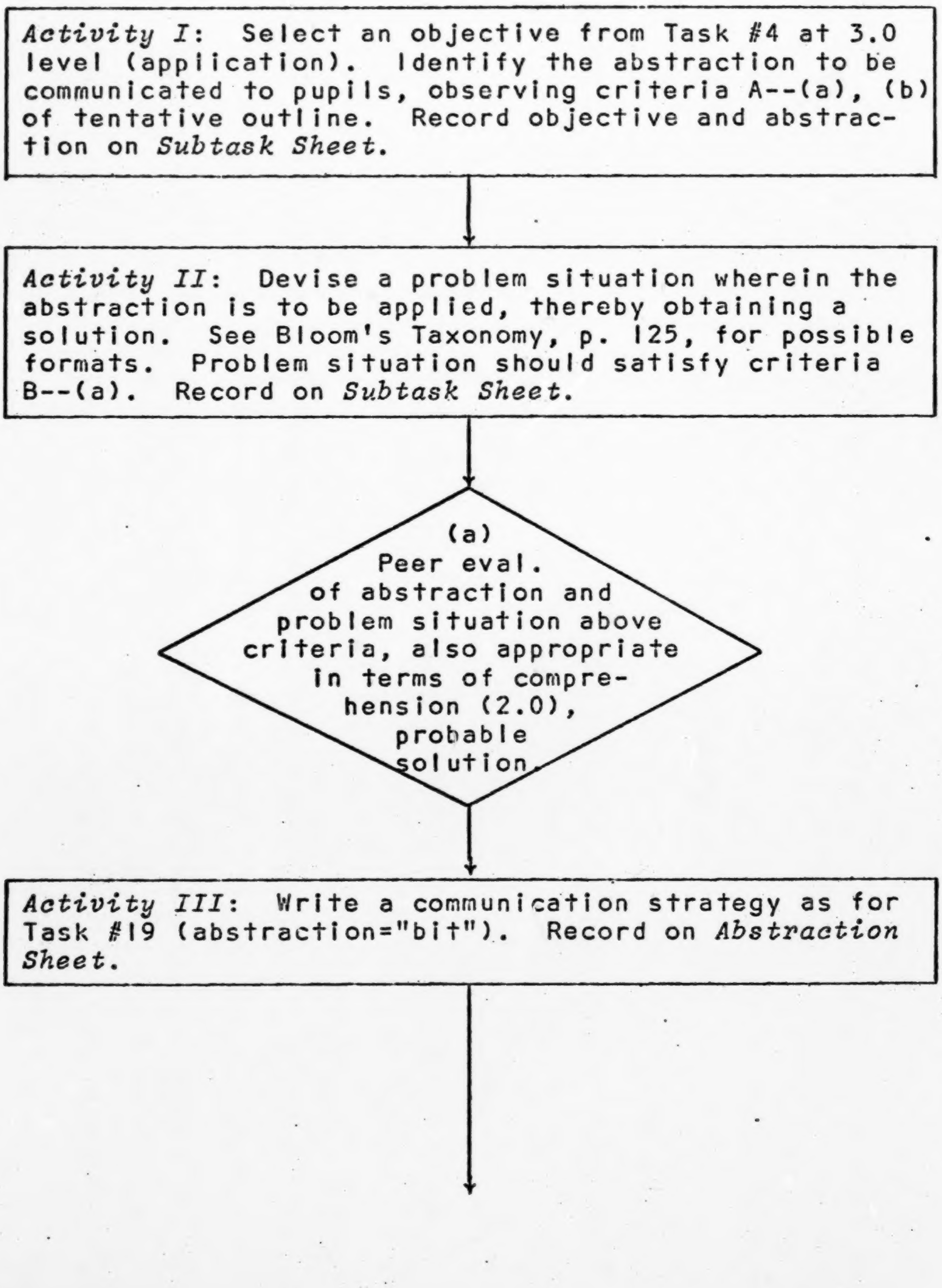
Activity IV: For each terminal behavior identified, write a subtask objective that would describe the behavior. Then order these subtasks in a logical sequence. Record the list of subtask objectives under *Subtask Objectives.*

Activity V: For *each* subtask objective identified in *Activity IV*, detail the complete learning sequence in *flow chart* form using the model provided. In detailing, note:

(1) The description of each process variable should include the content variables stated under Systems Variables.
(2) In the evaluation process, criteria of acceptable performance standards should be stated.
(3) Append any additional materials, etc. to the flow chart of a specific subtask. Record each subtask on separate *flow chart.*

Task 20: Elicit responses from pupils indicating the application of a previously comprehended abstraction to the solution of a problem situation.

NOTE: (a) Where peer evaluation is indicated--one other is sufficient.
(b) The abstraction could be a rule, procedural method, theorem, definition, principle, lemma, concept, theory, law, generalization, etc.

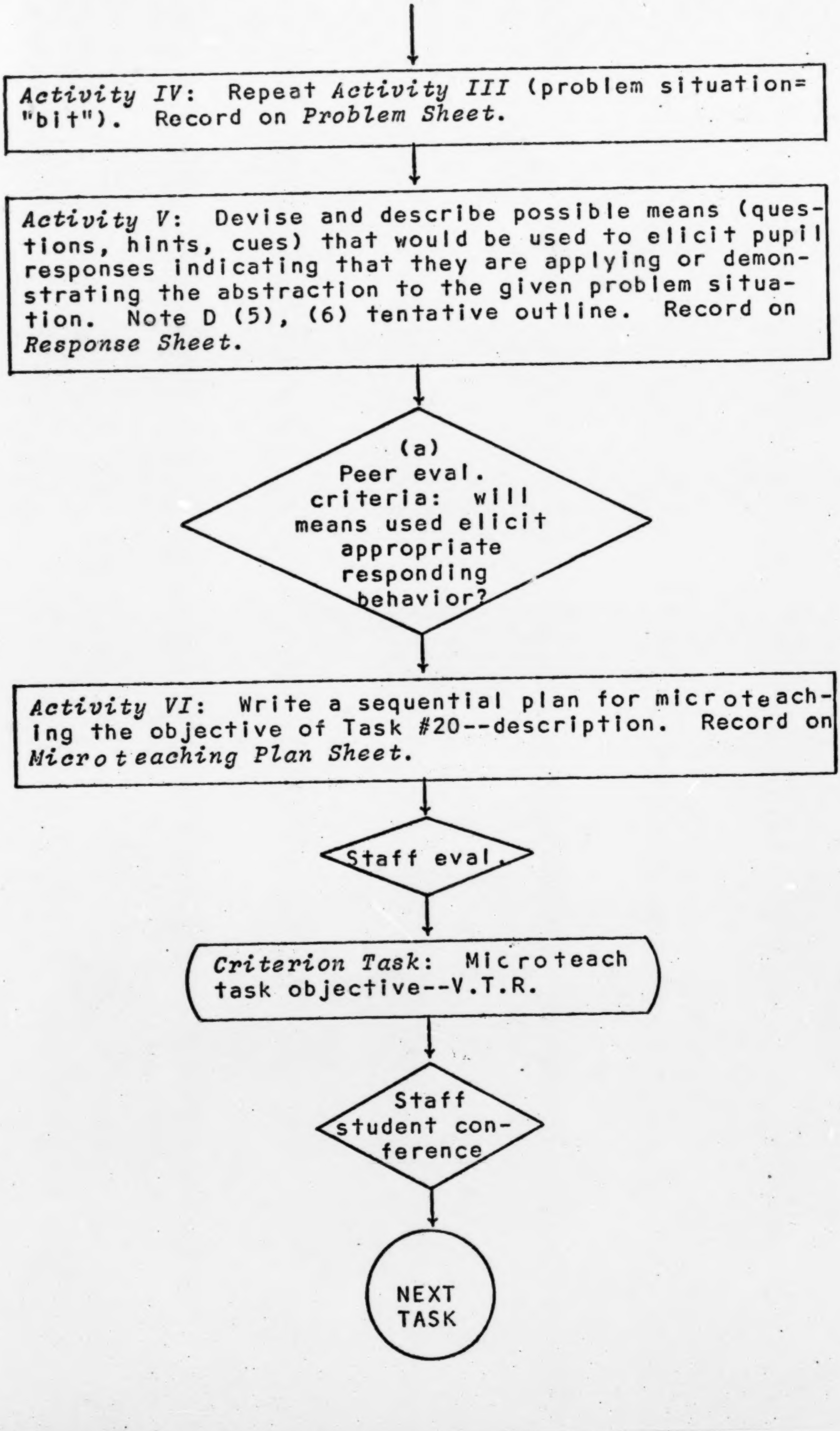


Activity I: Select an objective from Task #4 at 3.0 level (application). Identify the abstraction to be communicated to pupils, observing criteria A--(a), (b) of tentative outline. Record objective and abstraction on *Subtask Sheet*.

Activity II: Devise a problem situation wherein the abstraction is to be applied, thereby obtaining a solution. See Bloom's Taxonomy, p. 125, for possible formats. Problem situation should satisfy criteria B--(a). Record on *Subtask Sheet*.

(a) Peer eval. of abstraction and problem situation above criteria, also appropriate in terms of comprehension (2.0), probable solution.

Activity III: Write a communication strategy as for Task #19 (abstraction="bit"). Record on *Abstraction Sheet*.



Activity IV: Repeat *Activity III* (problem situation= "bit"). Record on *Problem Sheet*.

Activity V: Devise and describe possible means (questions, hints, cues) that would be used to elicit pupil responses indicating that they are applying or demonstrating the abstraction to the given problem situation. Note D (5), (6) tentative outline. Record on *Response Sheet*.

(a) Peer eval. criteria: will means used elicit appropriate responding behavior?

Activity VI: Write a sequential plan for microteaching the objective of Task #20--description. Record on *Microteaching Plan Sheet*.

Criterion Task: Microteach task objective--V.T.R.

APPENDIX B

DATA-GATHERING INSTRUMENTS

INDIVIDUAL PERFORMANCE LOG

Attached are forms for your use in keeping a record of individual performance, progress, and problems encountered on each of the tasks and activities in the program. Items of special interest include time spent on an activity as well as comments, impressions, suggestions, or problems relative to the activity or task.

To keep this log, enter the particular task number found at top of each task designation sheet and write a brief description of the activity, test, etc. Also record location at which you worked on the activity (e.g., library, Rm. 131, etc.).

In addition, describe any impressions, suggestions, or problems related to the completion of the activity. These comments might later be used in conferences and group meetings.

Following is a model entry illustrating the various items on the log:

TASK	DESCRIPTION OF ACTIVITY	TIME SPENT	DATE COMPLETED	LOCATION	COMMENTS SECTION (REACTIONS, PROBLEMS, ETC.)
1	Viewed Vimcet #1. Completed answers.	35	Oct. 2	Rm. 131	Program good; filmstrip tape pace too fast, made notetaking difficult

INDIVIDUAL PERFORMANCE LOG

NAME____________________________

TASK	DESCRIPTION OF ACTIVITY	TIME SPENT	DATE COMPLETED	LOCATION	COMMENTS SECTION (REACTIONS, PROBLEMS, ETC.)

DIRECTIONS FOR COMPLETING EVALUATION ITEMS

Form titled: EVALUATION OF STIMULUS AND CONTENT VARIABLES OF SELECTED BEHAVIORAL TASKS

Please evaluate each of the three tasks listed (4, 10, 20) on the basis of the variables (difficulty level, etc.) by circling the adjectives which applies to each.

The three tasks selected represent samples of tasks which might be thought of as similar in objectives and structure, i.e., Task 4 is representative of Tasks 5 and 6; Task 20 of the microteaching tasks.

Work through each task separately and supply comments as needed.

EVALUATION OF STIMULUS AND CONTENT VARIABLES OF SELECTED BEHAVIORAL TASKS

VARIABLE	TASK #4 WRITING COGNITIVE OBJECTIVES	TASK #10 DESIGNING INSTR. SYSTEM	TASK #20 (MICRO)- TEACHING FOR APPLICATION LEVEL
1. Difficulty level of task	Easy Moderately diff. Very difficult	Easy Moderately diff. Very difficult	Easy Moderately diff. Very difficult
2. Length of task as related to value of task	Too short Appropriate Too long	Too short Appropriate Too long	Too short Appropriate Too long
3. Appropriateness of task to program	Inappropriate Appropriate	Inappropriate Appropriate	Inappropriate Appropriate
4. Interest level of task	Low Medium High	Low Medium High	Low Medium High
5. Sequencing procedure	Illogical Logical	Illogical Logical	Illogical Logical
6. Media, materials, learning activities	Inadequate Adequate Excellent	Inadequate Adequate Excellent	Inadequate Adequate Excellent

7. Self-evaluation strategies, activities	Inadequate Adequate Excellent	Inadequate Adequate Excellent	Inadequate Adequate Excellent
8. Peer evaluation strategies, activities	Inadequate Adequate Very helpful	Inadequate Adequate Very helpful	Inadequate Adequate Very helpful
9. Staff evaluation strategies, activities	Inadequate Adequate Very helpful	Inadequate Adequate Very helpful	Inadequate Adequate Very helpful
10. Effectiveness of task	Ineffective Effective	Ineffective Effective	Ineffective Effective
11. Activities completed in task	Few Some Most or all	Few Some Most or all	Few Some Most or all

COMMENTS (refer to variable by number):

EVALUATION OF THE CAREER TEACHER PROJECT ON THE BASES OF SELECTED INSTRUCTIONAL VARIABLES

The following are considered to be important in studying the consequences to the learner of various types of instructional programs. Please read each item carefully from a learner point-of-view and comment on each.

1. *INDIVIDUALIZATION OF LEARNING*: Tasks are modifiable, adaptable to, provide for needs of individual learner, tasks geared to group norm.

2. *PACING*: Opportunity to complete tasks at own pace, group pace; develop own deadlines, observe class deadlines.

3. *LEARNER RESPONSE*: Responses made, tasks accomplished on individual, small group, large group bases. Provision for various types of learner responses.

4. *INTERACTION*: Type and amount of contact with others (peers, staff) throughout course. Social, intellectual climate, environment, etc.

5. *KNOWLEDGE OF RESULTS, FEEDBACK, REINFORCEMENT, EVALUATION*: By self, peers, staff.

6. *CLOSURE*: Seeing the end objective of tasks, subtasks, course.

7. *FUNCTION OF STAFF*: To assist, clarify, dispense knowledge (content), evaluate.

Interview Questions--Staff

End of First Semester

1. What are your regular duties, activities?

2. What were your responsibilities with regard to the M-STEP program?

3. How much time per week, during the semester, did you devote to M-STEP related activities?

4. How was this time broken down, i.e., four hours per week for microteaching, four hours per week for systems development?

5. To what extent were your M-STEP duties a part of your regular job?

6. In what way were you compensated for extra time spent on M-STEP activities?

7. What do you think were the goals of the fall semester M-STEP program?

8. Do you think the program was successful in reaching these goals? Explain.

9. Are fall semester program elements generalizable and exportable to other settings, in different-sized groups? Explain.

Washington State University College of Education

STUDENT TEACHER RATING SCALE

Student Teacher ______ School ______ Grade or Subject ______ Supervising Teacher ______

Please check the position on the scale that best describes the student teacher with respect to the item being rated. You will note that the scale has five levels ranging from unsatisfactory to superior and that levels 1, 3, and 5 are defined by descriptive phrases:

PERSONAL AND PROFESSIONAL QUALITIES

	1	2	3	4	5
1. APPEARANCE	Unusually attractive; very well groomed		Acceptable; makes satisfactory impression		Unkempt; makes unfavorable impression
2. VOICE	Highly pleasing, arrests favorable attention		Natural; can be heard but lacks color		Weak, indistinct; harsh, irritating
3. HEALTH AND VITALITY	Evinces vigorous and robust health; great deal of physical drive		Has fairly good health; overcomes physical disabilities satisfactorily		Ailing, complaining; lacks energy and drive; unable to cope with health problems
4. POISE, EMOTIONAL CONTROL	Poised and at ease in all situations; excellent self-control		Self-controlled in ordinary situations; usually at ease		Gets angry or depressed too easily; apathetic, unresponsive
5. INITIATIVE	Has excellent ideas and is willing to try them out; goes ahead very well on his own		Assumes responsibility of ordinary tasks; needs guidance on more important tasks		Overly dependent; requires detailed instructions; needs close supervision

6. ADAPTABILITY	Finds new situations challenging	Meets new situations satisfactorily	Adjusts to new situations with great difficulty
7. FORCEFULNESS	Strongly purposeful; shows marked ability to make things go	Not dynamic but can usually take positive action	Ineffectual; lacks force in voice and manner
8. SENSE OF RESPONSIBILITY	Consistently and thoroughly reliable in all situations	Dependable; carries out responsibilities reasonably well	Shirks responsibility; not dependable
9. SOCIABILITY	Excellent "mixer"; meets and talks with people and makes friends easily	Friendly but reserved	Aloof; very hard to get acquainted with; makes few friends
10. COOPERATION	Helpful; volunteers; works very well with others	Fairly helpful; does what is expected but does not volunteer	Self-centered; overly critical of others; doesn't work well with people
11. INTEREST IN TEACHING	Wholeheartedly enthusiastic about teaching	Likes teaching but shows little enthusiasm	Teaching just another job; merely aims to get by
12. POTENTIALITIES FOR GROWTH	Eager to learn; experiments; analyzes own performance well; open-mindedly seeks suggestions for improvement	Accepts suggestions fairly well; generally willing to learn	Reluctant to change opinions and methods; will not admit mistakes; rationalizes and tries to justify self

PROFESSIONAL COMPETENCIES AND SKILLS

	1	2	3	4	5
13. ORAL EXPRESSION	Excellent command of English; conveys ideas clearly, effectively		Uses acceptable English; makes self understood reasonably well		Makes frequent errors in speech; effective expression difficult
14. KNOWLEDGE OF SUBJECT MATTER	Accurate and extensive knowledge; excellent background		Knowledge fairly accurate but somewhat limited		Knowledge inaccurate and inadequate; very little or no background
15. INSTRUCTIONAL PLANNING	Creative and resourceful in planning; plans show extensive preparation and excellent organization		Makes adequate plans; plans show satisfactory selection of aims, activities, and materials		Plans are poor; lack ingenuity, logical organization, thorough preparation
16. SKILL IN MAKING ASSIGNMENTS	Assignments are clear, definite, interesting; well adapted to varying abilities of pupils		Generally gives reasonable, workable assignments		Assignments are indefinite, confusing; not adaptable to varying levels of ability
17. SELECTIONS OF INSTRUCTIONAL MATERIALS	Resourceful in assembling and using a variety of materials adapted to pupils' abilities and interests		Supplements textbook to some extent with other learning materials		Leans on the textbook; uses little initiative in assembling materials
18. SKILL IN QUESTIONING	Questions thought provoking; clearly phrased; distribution excellent		Phraseology and distribution fair; more emphasis on information than on critical thinking		Questions poorly constructed; fail to stimulate pupils' thinking

19. UNDERSTANDING OF STUDENTS AS INDIVIDUALS	Marked ability to study and understand children as individuals; adapts teaching very well to individual needs	Fair understanding; stresses subject matter rather than needs and interests of individuals	Appears to be lacking in understanding of individualities of children
20. RAPPORT WITH PUPILS	Friendly, approachable; very well liked by pupils	Gets along reasonably well with pupils and is accepted by them	Is disliked by pupils or at best is merely tolerated by them
21. DISCIPLINE; CONTROL OF PUPILS	Obtains excellent attention, order, cooperation, and respect without apparent effort	Class usually cooperative and respectful; some pupils need to be called to order	Class noisy, disorganized, uncooperative; methods of control poor
22. CARE OF ROOM	Regularly arranges room environment to stimulate pupil appreciation of orderliness, beauty, and healthful living	Arranges bulletin board and room environment as requested; fairly conscious of heating, lighting, ventilation.	Seldom checks room health conditions; minimum effort spent in making room attractive

	1	2	3	4	5
OVER-ALL RATING	Outstanding Superior	Above Average Good	Satisfactory Average	Below Average Weak	Unsatisfactory Failing

Further comment helpful to student teacher and college supervisor:

Date:____________________ Signed__________________________
(Supervising Teacher)

Observer________________

Teacher______________________
School ______________________
Class__________ Date__________
Length of Observation__________

WSU-BELLEVUE CAREER TEACHER PROJECT

M-STEP INTERN PERFORMANCE EVALUATION		1 If Observed	1 Low	3 Average	6 High	OBSERVATION NOTES AND SUGGESTIONS
Objectives	States objectives in terms of learner behavior and in several domains, on various levels.					
Individualizing Instruction	Defines prerequisites for task. Preassesses students. Devises different sequences for different abilities.					
Materials and Activities	Selects materials and activities that provide for appropriate practice of learner objectives.					
Establishing Set for Objectives	Seeks evidence of comprehension of objectives. Seeks evidence of student acceptance of willingness to perform tasks.					
Nature of Student Responses	Elicits frequent responses. Samples entire class. Provides feedback in relation to objectives.					
Reinforcement	Provides immediate reinforcement of student responses. Varies reinforcement in relation to responses. Rewards appropriate responses.					
Evaluation	Samples behavior defined in objectives. Provides prompt feedback to student. Uses evaluation to revise systems of instruction.					

WSU-BELLEVUE CAREER TEACHER PROJECT

Program Evaluation--Second Semester

Please rate each of the following components of the in-Bellevue phase of the M-STEP program. Use the following rating key and use extra paper if needed.

1 = poor
2 = fair
3 = satisfactory
4 = good
5 = excellent

ACTIVITY	RATING	REASON FOR RATING GIVEN
Time allocation for study, preparation, planning	1 2 3 4 5	
In-class teaching duties, responsibilities	1 2 3 4 5	
Planning sessions, conferences with supervising teacher, other staff members	1 2 3 4 5	
Evaluation activities:		
Self	1 2 3 4 5	
Supervising teacher	1 2 3 4 5	
WSU staff	1 2 3 4 5	
WSU classes	1 2 3 4 5	
Weekly seminars	1 2 3 4 5	

WSU-BELLEVUE M-STEP PROGRAM

Intern Interview Questions

1. What has been, to your way of thinking, the most valuable part of the M-STEP program?

2. What has been the least valuable part?

3. What activity has had the most carry-over from first to second semester?

4. What activity has had the least carry-over?

5. What would you change about the program in redesigning it for use in a wider application, for example, in the regular teacher education program at WSU?

6. To what degree has your behavior (as a learner and as a teacher) changed as a result of your participation in the M-STEP program?

7. What aspect of the program do you believe will have the most carry-over into your work next year as a beginning teacher?

8. Please add any comments or reactions not called for in the above questions.

BELLEVUE PUBLIC SCHOOLS
Bellevue, Washington
3 June 1968

M-STEP QUESTIONNAIRE FOR SUPERVISING TEACHERS

As part of the overall evaluation of the M-STEP program, each supervising teacher is requested to complete the attached questionnaire. Please respond to each question in light of your interpretation of the original objectives and expectations of the program.

---

1. Which of the following terms best describes your overall evaluation of the success of the program:

_____a. Failure
_____b. Minimum success
_____c. Moderately successful
_____d. Highly successful

2. Which of the following categories best describes your student teaching experience in contrast to that received by M-STEP interns:

_____a. My student teaching experience much better
_____b. My student teaching experience better
_____c. About the same
_____d. M-STEP moderately better
_____e. M-STEP significantly better

3. As a supervising teacher, contrast your attitude toward M-STEP now (June 3) with your attitude when you first became a member of the M-STEP team:

_____a. Less favorable
_____b. Same
_____c. More favorable

4. Estimate the number of hours you spent this school year that were directly attributable to your M-STEP obligation (meetings, material preparation, conversations, etc.). Exclude actual supervisory time in your classroom. Divide into two categories:

_____a. During school day (8-4) (hours spent for 1967-68 school year)
_____b. Other times (hours spent for 1967-68 school year)

(The purpose of the following question is for attitude toward M-STEP--not commitment to future participation.)

5. Would you be interested in participating as an M-STEP supervising teacher next year?

______a. Yes
______b. No

In another year other than 1968-69?

______a. Yes
______b. No

Comments:

6. Check the item that best describes your feelings about the preservice program for supervising teachers conducted in fall, 1967:

______a. Excellent
______b. Good
______c. Fair
______d. Poor
______e. Useless

Comments: (Indicate ways for improving this in-service program.)

7. In comparison to other preservice programs for cadet supervisors, how would you classify the preservice program for M-STEP supervising teachers?

______a. Have not previously participated
______b. M-STEP preservice much better
______c. M-STEP preservice better
______d. Same
______e. Other preservice program moderatelv better
______f. Other preservice program much better

Comments:

8. Check the item that best describes your feelings about central office help and support in conducting your part of M-STEP:

______a. Excellent
______b. Good
______c. Fair

______d. Poor
______e. Nonexistent

Comments:

(The following questions pertain to your observations about the M-STEP intern, his work schedule and load, and the training program conducted by WSU. They are not intended to be an evaluation of the strength and weakness of the intern nor of his potential as a Bellevue teacher.)

9. From your observations, choose the terms that best describe your intern's overall evaluation of the success of M-STEP:

______a. Failure
______b. Minimal success
______c. Moderately successful
______d. Highly successful

10. Contrast your intern's attitude toward M-STEP now (June 3) with his attitude when you first met him:

______a. Less favorable
______b. Same
______c. More favorable

Comments:

11. Check the item that best describes the communication that exists between you and your intern:

______a. Excellent
______b. Good
______c. Fair
______d. Poor
______e. Nonexistent

Comments:

(The following questions are open-ended. Please answer candidly and briefly.)

12. How can we improve the mechanics of M-STEP for next year?

13. Do you feel that commitments were made to you or to your M-STEP intern that were not kept?

14. How many observations have been arranged in other classrooms or school for your intern? ____________________

Would you arrange more or less next year? ____________________

Comments:

15. This year M-STEP interns were prehired by Bellevue. Should this practice be continued next year? ____________________

Comments:

For each intern, the semester was a combination of practical experience and related study. The experience was guided by each supervising teacher; the related study was directed by WSU staff. The following chart was a suggested schedule for the study and practical parts of the term.

	Study	Practice
February	75%	25%
March	66%	33%
April	33%	66%
May-June	25%	75%

Please fill in the chart below listing percentages as they actually occurred with your M-STEP intern:

	Study	Practice
February	____	____
March	____	____
April	____	____
May-June	____	____

BELLEVUE PUBLIC SCHOOLS
Bellevue, Washington
3 June 1968

SUPPLEMENT TO M-STEP SUPERVISING TEACHER QUESTIONNAIRE

Your response to the following section will help in evaluating the content of the M-STEP program.

As you will recall, the completion of twenty-five task assignments by the M-STEP interns was contemplated during the school year. Of those twenty-five, the following fifteen were completed in detail. Hopefully, a carry-over from seminar work to the teaching situation was accomplished. Please evaluate M-STEP intern mastery of the following task assignments as demonstrated in his teaching performance. Check the appropriate space from 1 (low) to 5 (high) and if you feel no judgment can be made, check space entitled "no judgment possible."

A place for comment is available after each task assignment. If you can recall a specific example of the intern's practical use of this task assignment, please describe.

Task 1: Define "behavioral objectives" and list characteristics of behavioral objectives:

______1. low
______2.
______3.
______4.
______5. high
______6. no judgment possible

____

____

____

Task 2: Distinguish between objectives which are behaviorally stated and those not so stated:

______1. low
______2.
______3.
______4.

_____5. high
_____6. no judgment possible

Task 2b: Identify pupil performance standards in objective statements and construct same:

_____1. low
_____2.
_____3.
_____4.
_____5. high
_____6. no judgment possible

Task 3: Write behavioral objective for learning activities appropriate to your field of teaching:

_____1. low
_____2.
_____3.
_____4.
_____5. high
_____6. no judgment possible

Task 4: Write behavioral objective for learning activities (appropriate to your field of teaching) at the six levels specified in *Taxonomy of Educational Objectives--Cognitive Domain*:

_____1. low
_____2.
_____3.
_____4.

_____5. high
_____6. no judgment possible

Task 5: Write behavioral objectives for learning activities (appropriate to your field of teaching) at the first three levels specified in the *Taxonomy of Educational Objectives--Affective Domain:*

_____1. low
_____2.
_____3.
_____4.
_____5. high
_____6. no judgment possible

Task 9: Write a linear program (upper limit, approximately 40 frames) which would communicate one of the "bits" of either Task 19, 20, or an appropriate equivalent, at the 2.0 or 3.0 level of the *Taxonomy of Educational Objectives--Cognitive Domain:*

_____1. low
_____2.
_____3.
_____4.
_____5. high
_____6. no judgment possible

Task 10: Design an instructional system in your own field for achieving a task objective that would include two of the three domains (Tasks 4, 5, 6):

______1. low
______2.
______3.
______4.
______5. high
______6. no judgment possible

____

____

____

Task 11: Compose preassessment procedures and evaluation items for several objectives of different levels of complexity and from different domains of learning:

______1. low
______2.
______3.
______4.
______5. high
______6. no judgment possible

____

____

____

Task 18a: Describe to pupils a specific learning task objective in such a way as to insure pupil comprehension of the task (communication of task):

______1. low
______2.
______3.
______4.
______5. high
______6. no judgment possible

____

____

____

Task 18b: Attempt to promote and (concurrently) evaluate a favorable reaction set from pupils toward the task (acceptance of task):

______1. low
______2.
______3.
______4.
______5. high
______6. no judgment possible

Task 19: Communicate to pupils a bit of new information, or a new psychomotor behavior. Have pupils respond in a manner which indicates they recall or comprehend this new information or practice this new psychomotor behavior:

______1. low
______2.
______3.
______4.
______5. high
______6. no judgment possible

Task 20: Elicit responses from pupils indicating the application of a previously comprehended abstraction to the solution of a problem situation:

______1. low
______2.
______3.
______4.
______5. high
______6. no judgment possible

Task 21: Elicit responses from pupils indicating evidence of divergent thinking:

_____1. low
_____2.
_____3.
_____4.
_____5. high
_____6. no judgment possible

____

____

____

Task 22: Elicit responses from pupils indicating valuing behavior within the 3.0 level of the *Taxonomy of Educational Objectives--Affective Domain:*

_____1. low
_____2.
_____3.
_____4.
_____5. high
_____6. no judgment possible

____

____

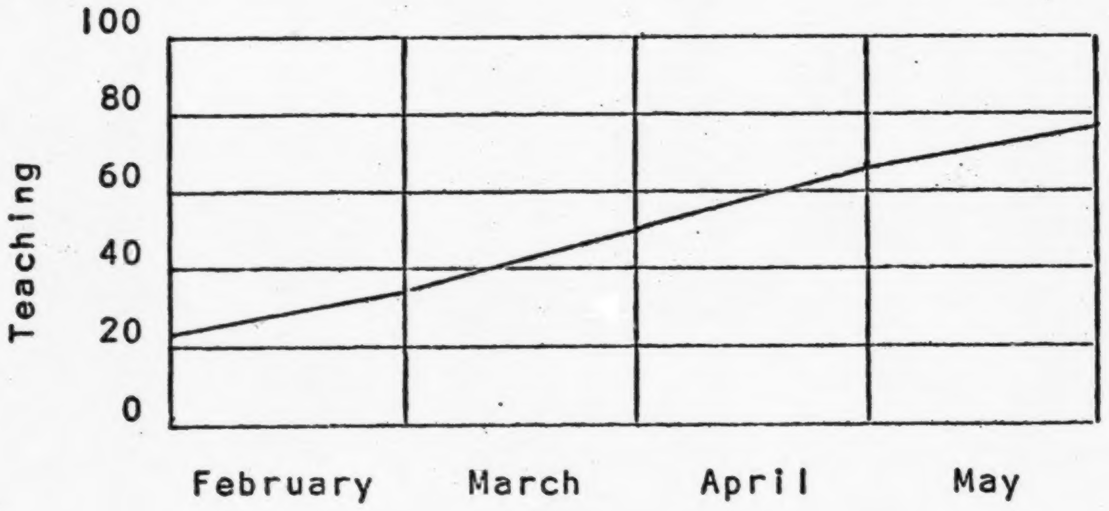
____

Name ____

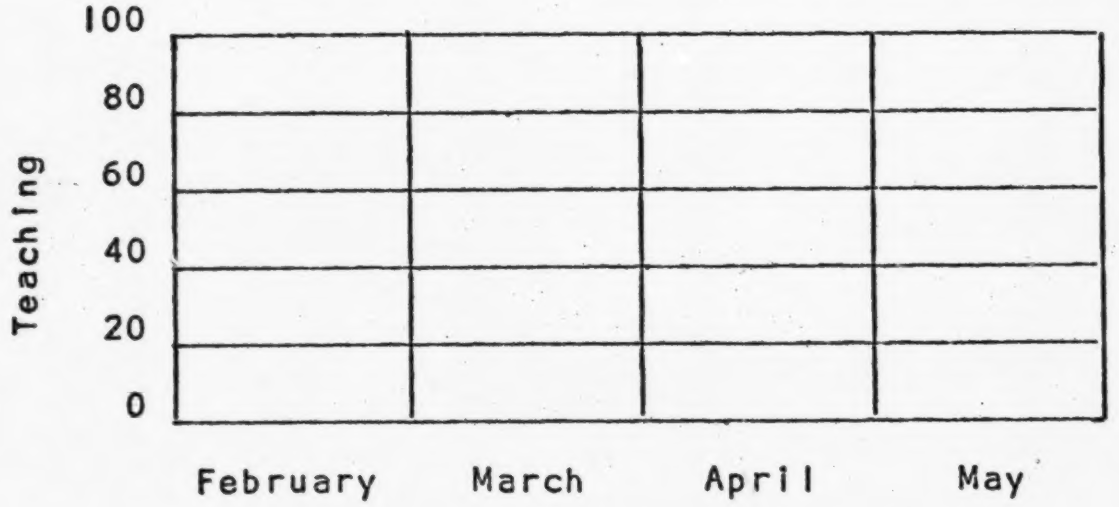
School ______________________________ Grade __________

For each intern the semester was a combination of practical experience and related study. The experience was guided by each supervising teacher with the related study directed by WSU staff.

The following graph represents a suggested schedule for the study and practice parts of the term.



Please fill in the graph below showing your estimated schedule for assumption of teaching responsibilities during the semester.



APPENDIX C

SUPPLEMENTARY TABLE

TABLE 30

INTERN INTERVIEW QUESTIONS

Question	Response	Frequency of Response
1. What has been, to your way of thinking, the most valuable part of the M-STEP program?	Student teaching	8
	Behavioral objectives and learning to think behaviorally	7
	Microteaching	3
	Sensitivity training	2
	Combination of learning about behavioral objectives and teaching	1
	Independence given to interns	1
	Length of program	1
2. What has been the least valuable part?	Education 499 project	5
	Wednesday night meetings	4
	Traveling WSU classes	3
	Microteaching, too ideal	2
	Released time idea	1
	General lack of structure (WSU)	1
	Programmed learning, systems design assignment	1
	Whole semester with same person	1
	Communications problems	1
	Sensitivity groups	1
	Semester-long length of spring program (too long)	1
3. What activity has had the most carry-over from first to second semester?	Behavioral objectives	12
	Microteaching	5
	Concept of reinforcing learning	1
	Familiarity with Bellevue materials	1
	Linear programming assignment	1

4. What activity has had the least carry-over?	Programmed learning assignment	5
	Systems design flow chart assignment	4
	Videotape recordings (microteaching)	3
	Affective objectives work	2
	Sensitivity training	2
	Behavioral objectives	1
5. What would you change about the program in redesigning it for use in a wider application, for example, in the regular teacher education program at WSU?	Improve communication between WSU and Bellevue interns	4
	Better inform supervising teachers about their duties	4
	Cut Wednesday night meetings to every other week	3
	Make student teaching shorter	3
	Reduce college supervisor-intern ratio	3
	Omit classes second semester	3
	Make more assignments in advance	2
	Start interns teaching sooner	2
	Videotape interns second semester	2
	Give more college credit for second semester work	2
	Omit sensitivity training	1
	Modify tasks more specifically to academic area	1
	Change structure of second semester work	1
	Provide cross-cultural experiences	1
	Conduct college classes in evening rather than daytime	1
	Provide more supervision of college courses	1
	Provide more time for observations	1
	Make fall semester activities more practical	1
	Allow interns to work with more than one supervising teacher	1

TABLE 30--*Continued*

Question	Response	Frequency of Response
6. To what degree has your behavior (as a learner and as a teacher) changed as a result of your participation in the M-STEP program?	More interested in how and why students learn	5
	Feel more like a teacher now	3
	Know more about human behavior	2
	More patient and compassionate toward my students	1
	More sensitive	1
	Disillusioned by bureaucracy	1
	Idealism shattered about what is possible with 33 students	1
7. What aspect of the program do you believe will have the most carry-over into your work next year as a beginning teacher?	Behavior objectives	9
	Sensitivity training	2
	Being in the actual school that one is going to teach in next year	2
	Student teaching	1
	Familiarity with curriculum materials	1
	Ideas and suggestions from fellow teachers	1